

Reporting Year 2007

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) Section 313



# Toxics Release Inventory Reporting Requirements

*Advanced Concepts*  
*(Includes Recap of Basics)*

Note: This program includes audio narration.  
Use speakers or headphones for audio. Click Notes button for captions.

**TRI**

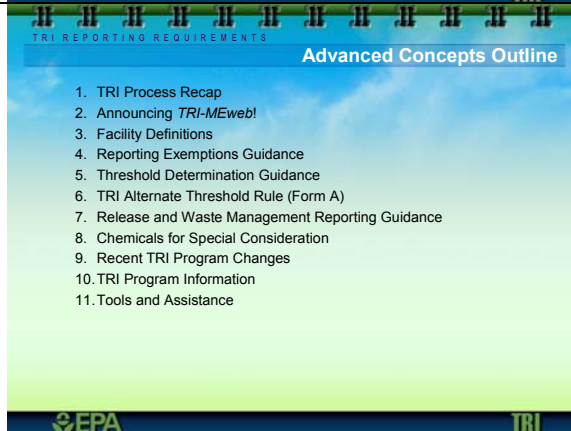
**Slide 1**  
**Welcome Screen**  
Duration: 00:00:49



**Notes:**

Welcome to the Emergency Planning and Community Right-to-Know Act, Section 313, Toxics Release Inventory online training for the 2007 reporting year. This is the Advanced Concepts Module of a two part training course that is made up of this module and an Basic Concepts module. The Advanced Concepts module assumes a basic understanding of the Toxics Release Inventory, or TRI, requirements and focuses on key concepts that will help to ensure accurate TRI reporting. The Basic Concepts module walks you through the process of determining whether or not your facility is required to report to TRI, and if so, how you actually prepare and submit information to TRI.

**Slide 2**  
**Advanced Concepts Outline**  
Duration: 00:00:57



**Notes:**

In this module we'll first introduce a new TRI reporting tool – TRI-ME web – that is the next generation of TRI Made Easy reporting software. We'll also provide a brief review of the overall TRI process and then focuses on key concepts that will help to ensure accurate TRI reporting, including facility definitions, and guidance on reporting exemptions, threshold determinations, the Form A, and release and waste management reporting. We will also discuss a number of TRI chemicals and chemical categories with special considerations. Finally, we will go over recent changes to the TRI program, how to submit forms, revisions, and withdrawals electronically, and the tools and assistance that are available to help facilities with their TRI requirements.

## Slide 3

### The TRI Process - Recap

Duration: 00:02:33

**The TRI Process - Recap**

1. Is my facility covered under EPCRA Section 313 (TRI)?
  - a) Review NAICS Code Applicability
  - b) Employee Threshold Determination
  - c) Chemical Use Threshold Determination
2. For which of the 650 listed TRI chemicals must I submit a TRI report?
  - a) How is the chemical used at the facility? Is it manufactured, processed or otherwise used?
  - b) How much of the chemical is manufactured, processed, or otherwise used at the facility? Are the TRI regulatory thresholds exceeded?
3. How do I report?
  - a) Submit a Form R or a Form A Certification Statement to EPA and state/tribal authority for each chemical requiring a report.
4. What do I report?
  - a) On-site releases of the chemical
  - b) On-site treatment, energy recovery and recycling
  - c) Off-site transfers of the chemical
  - d) Pollution prevention activities

EPA TRI

### Notes:

Let's briefly review the process for determining whether or not a facility needs to report to TRI and how it reports to TRI.

A stepwise process can be used to determine if and what you would need to report to TRI. The first step is determining whether or not your facility is covered under EPCRA Section 313 and would, therefore, need to consider its toxic chemicals for TRI reporting. Whether or not your facility is covered is based on the types of activities carried out at the facility and the number of employees working for your facility. NAICS is the North American Industrial Classification System, which assigns numeric codes to characterize the activity taking place at the facility. We will talk more about the NAICS codes requirement shortly.

The next step is to determine for which TRI chemicals you must submit a TRI report. Covered facilities need to look at the TRI chemicals that are on the list and that may be present at the facility. Next, facilities need to look at how the chemicals are used. Are they manufactured? Processed? Or otherwise used? These are the TRI threshold activities. We will be describing each of these in more detail.

Next, facilities must calculate the quantity of the TRI chemical that is manufactured, processed, or otherwise used, and compare those quantities to the TRI activity thresholds. Only when activity thresholds are exceeded would the facility be required to complete and submit a TRI report, either a Form R or a Form A.

What information do facilities report to TRI? For the Form R, which is the more common means of TRI reporting, facilities report on how the TRI chemical is managed as waste, including onsite releases, treatment, energy recovery, recycling of the TRI chemical and offsite transfers, and pollution prevention activities that are conducted at the facility for that chemical.

Because TRI reporting is done on an annual basis, facilities should reexamine their thresholds and reporting every year to make sure they are reporting accurately for all of the chemicals for which they have exceeded thresholds.



## Slide 4

### Section I: Announcing TRI-ME Web!

Duration: 00:00:05



### Notes:

## Slide 5

### Announcing TRI-MEweb!

Duration: 00:00:59

A presentation slide with a blue and green background. It features a header "TRI REPORTING REQUIREMENTS" and "Announcing TRI-MEweb!". The slide contains a bulleted list of information about TRI-MEweb availability and registration. The EPA and TRI logos are at the bottom.

TRI REPORTING REQUIREMENTS

**Announcing TRI-MEweb!**

- Available to all facilities in all states in Reporting Year 2007 (RY2007)
  - Exception is first time filers with EPA
    - A first time filer is a facility that has never reported to EPA previously and does not have a TRI facility Id (TRIFID)
  - First time filers are encouraged to download the TRI-MEdesktop application at <http://www.epa.gov/tri/report/software/index.htm> and submit electronically via CDX
- Technical contacts as reported in RY2006 will receive an email or regular mail with information to register with CDX/TRI-MEweb and a facility access key in March, 2008
  - If you did not receive notification and are the technical contact for your facility, please contact the CDX help desk at 1-888-890-1995

EPA TRI

### Notes:

TRI-ME web is the next generation of software for completing and submitting TRI forms. TRI-ME web is now available to all facilities for reporting year 2007 provided your facility has filed to TRI in the past and has a TRI facility ID. If your facility is reporting to TRI for the first time, you are encouraged to download and use the TRI-ME desktop application available from the website shown here.

Facilities need a facility access key to register for TRI-ME web and submit their reports via the Central Data Exchange, or CDX. Access keys were sent to TRI technical contacts via email and regular mail in March of this year. If you did not receive an access key for your facility, contact the CDX help desk at the toll free number shown here.

## Slide 6

### Important Notice on TRI-MEweb!

Duration: 00:00:55

TRI REPORTING REQUIREMENTS

### Important Notice on TRI-MEweb!

- TRI-MEweb requires certifiers to register with the Central Data Exchange (CDX) prior to being able to certify TRI-MEweb forms.
  - Registration includes creating, signing, and sending an electronic signature agreement (ESA) to the TRI data processing center
  - This process is estimated to take a minimum of 5 business days
  - Submission of the ESA is one time only as long as the certifier represents the facility
- The TRI program recommends that facilities using TRI-MEweb register their certifier immediately upon accessing the application
- For more information about TRI-MEweb and TRI-MEdesktop, please visit <http://www.epa.gov/tri/report/software/index.htm>

EPA TRI

### Notes:

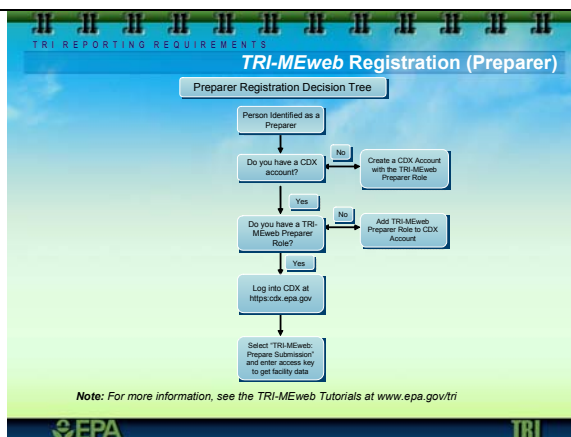
Certifiers of TRI forms submitted via TRI-ME web must first register with EPA's Central Data Exchange. Registration includes creating, signing, and mailing and electronic signature agreement, or ESA, to the TRI data processing center. Facilities should identify their certifiers and complete the registration process as soon as possible because this process will take at least 5 business days. Note that the submittal of an ESA is a new requirement beginning this year, but it only needs to be done once, as long as the certifier represents the facility.

For more information about the TRI-ME web or the TRI-ME desktop application, including web-based tutorials, visit the TRI website shown here.

## Slide 7

### TRI-MEweb Registration (Preparer)

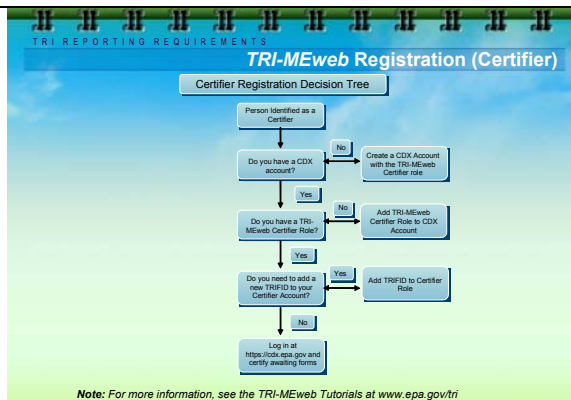
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### Notes:

Those wishing to use TRI-ME web to prepare and submit their TRI submissions must have BOTH an account with EPA's Central Data Exchange AND have added the TRI-ME web preparer role to their CDX account. This decision tree can help you determine which of these requirements apply to you and ensure that you will be able to access your facility data in TRI-ME web.

**Slide 8**  
**TRI-MEweb  
 Registration (Certifier)**  
 Duration: 00:00:40



**Notes:**

Those certifying TRI forms submitted via TRI-ME web must also have BOTH a CDX account and have added the TRI-ME web certifier role to their CDX account. Again, this decision tree can help you identify and complete the necessary steps needed to log into the CDX and certify awaiting forms.

Note that there is more assistance available for preparers and certifiers using TRI-ME web at the EPA TRI program homepage at [www.epa.gov/tri](http://www.epa.gov/tri).

**Slide 9**  
**Section II: Definition of  
 "Facility"**  
 Duration: 00:00:05



**Notes:**

**Slide 10**  
**Definition of "Facility"**  
 Duration: 00:01:23

**Definition of "Facility"**

- Facility = the TRI reporting unit
  - Primary NAICS code determination at facility level
  - Chemical threshold determinations made at facility level
- "Facility - all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person)." (EPCRA §329(4))

**Notes:**

As previously mentioned, the reporting unit under TRI is the facility. Primary NAICS codes determinations and employee threshold determinations are made at the facility level. Chemical threshold determinations are also made at the facility level. Therefore, the definition of a facility under TRI is very important. EPA defines a facility as "all buildings, equipment, structures, and other stationary items which are located on a single site or contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with such person)."

## Slide 10 - Continued Definition of "Facility"

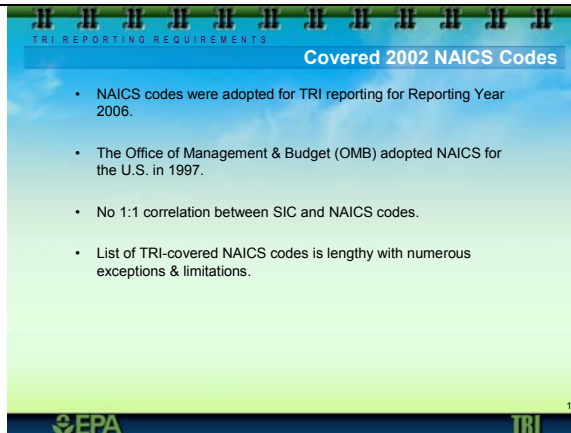
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### Notes:

A key point here is that establishments or operations owned or operated by the same company or federal agency that are contiguous or adjacent are considered a single facility under TRI. In some instances, a single site or adjacent properties may have multiple and distinct establishments, each considered to be a unique and separate economic unit. Together, these establishments comprise a single facility under TRI if they are owned or operated by the company or agency.

## Slide 11 Covered 2002 NAICS Codes

Duration: 00:01:23



TRI REPORTING REQUIREMENTS

### Covered 2002 NAICS Codes

- NAICS codes were adopted for TRI reporting for Reporting Year 2006.
- The Office of Management & Budget (OMB) adopted NAICS for the U.S. in 1997.
- No 1:1 correlation between SIC and NAICS codes.
- List of TRI-covered NAICS codes is lengthy with numerous exceptions & limitations.

EPA TRI

### Notes:

Only certain industries are covered by TRI, including: all manufacturing; portions of metal mining; portions of coal mining; certain electric utilities; treatment, storage, and disposal facilities; solvent recovery facilities; chemical distributors; and petroleum bulk terminals.

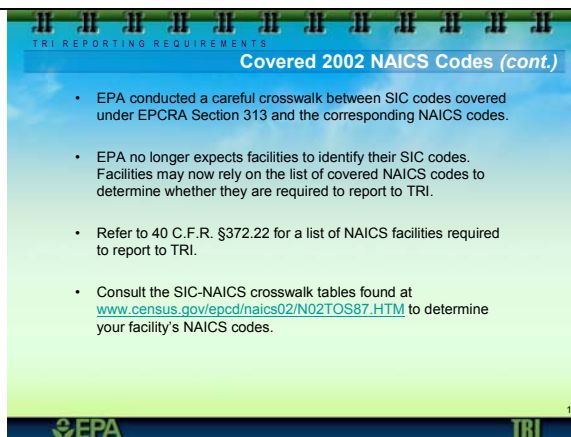
Facilities should be aware that prior to reporting year 2006, the industries covered by TRI were defined by their primary Standard Industrial Classification codes. The US Office of Management and Budget adopted NAICS codes to replace the SIC Code System in 1997 and, in reporting year 2006, the TRI program began using the NAICS codes developed in 2002 to define which facilities are covered under TRI. In addition, the TRI forms now require that facilities report the NAICS codes that represent their facility's industry sector.

There is no one-to-one correlation between the old SIC code system and NAICS codes. The list of TRI-covered NAICS codes is rather lengthy. And it does include a number of exceptions and limitations.

## Slide 12

### Covered 2002 NAICS Codes (cont.)

Duration: 00:00:53



TRI REPORTING REQUIREMENTS

#### Covered 2002 NAICS Codes (cont.)

- EPA conducted a careful crosswalk between SIC codes covered under EPCRA Section 313 and the corresponding NAICS codes.
- EPA no longer expects facilities to identify their SIC codes. Facilities may now rely on the list of covered NAICS codes to determine whether they are required to report to TRI.
- Refer to 40 C.F.R. §372.22 for a list of NAICS facilities required to report to TRI.
- Consult the SIC-NAICS crosswalk tables found at [www.census.gov/epcd/naics02/N02TOS87.HTM](http://www.census.gov/epcd/naics02/N02TOS87.HTM) to determine your facility's NAICS codes.

EPA TRI

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### Notes:

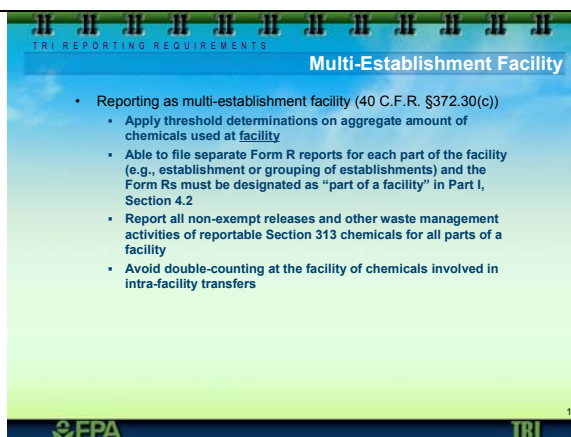
EPA conducted a careful crosswalk of the covered SIC codes to the 2002 NAICS codes. Therefore, facilities that were covered by TRI under previous years based on their SIC code classifications will also be covered under the NAICS code classifications. SIC codes are no longer necessary to determine whether your facility is covered by TRI. Instead, facilities can rely on the list of NAICS codes that is published in Chapter 40 Section 372.22 of the Code of Federal Regulations.

To identify your facility's NAICS codes using its SIC codes, facilities can access a crosswalk between the old SIC code system and the new NAICS codes at the website shown here.

## Slide 13

### Multi-Establishment Facility

Duration: 00:01:34



TRI REPORTING REQUIREMENTS

#### Multi-Establishment Facility

- Reporting as multi-establishment facility (40 C.F.R. §372.30(c))
  - Apply threshold determinations on aggregate amount of chemicals used at facility
- Able to file separate Form R reports for each part of the facility (e.g., establishment or grouping of establishments) and the Form Rs must be designated as "part of a facility" in Part I, Section 4.2
- Report all non-exempt releases and other waste management activities of reportable Section 313 chemicals for all parts of a facility
- Avoid double-counting at the facility of chemicals involved in intra-facility transfers

EPA TRI

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### Notes:

Multi-establishment facilities were discussed in detail in the Basic Concepts module of this online training course. In some instances, a single site or adjacent properties may have multiple and distinct establishments, each considered to be a unique and separate economic unit. Together, these establishments comprise a single facility under TRI if they are owned or operated by the company or agency.

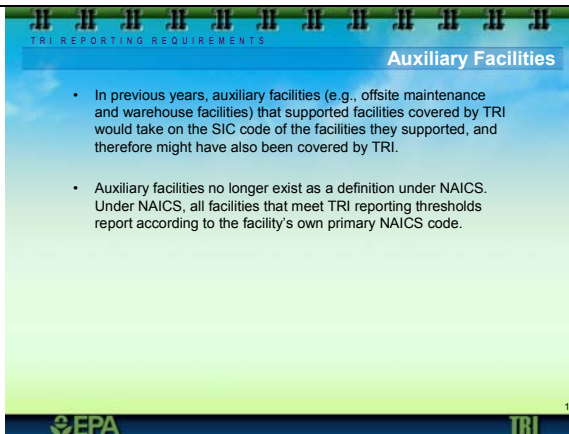
For threshold determinations facilities must consider the aggregate amount of TRI chemicals used throughout the facility, including all of the establishments. If a threshold is exceeded a TRI form is required. Multiple establishment facilities can file separate Form R reports for each part of the facility.

On the TRI Form R and in the reporting software, the filer can designate their submittal for a part of the facility. Remember to report all non-exempt releases and other waste management activities of reportable TRI chemicals for all parts of a facility. When reporting as multiple establishments, avoid double-counting of the same chemicals. When facilities do report as separate establishments within the same facility, the quantities on the reports will be added together by EPA, and the reports that are made available to the public will show the aggregate amounts.



## Slide 14 Auxiliary Facilities

Duration: 00:01:22



- In previous years, auxiliary facilities (e.g., offsite maintenance and warehouse facilities) that supported facilities covered by TRI would take on the SIC code of the facilities they supported, and therefore might have also been covered by TRI.
- Auxiliary facilities no longer exist as a definition under NAICS. Under NAICS, all facilities that meet TRI reporting thresholds report according to the facility's own primary NAICS code.

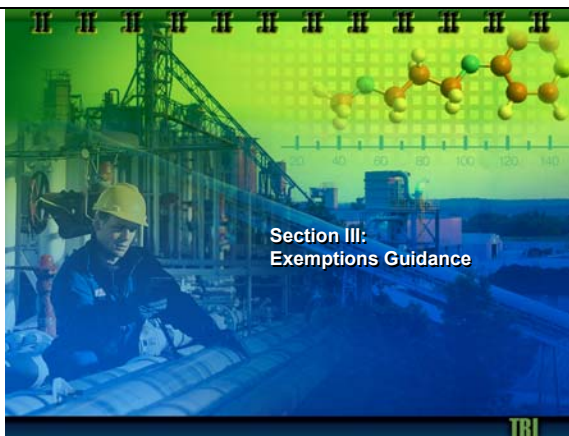
### Notes:

Prior to the 2006 reporting year, auxiliary facilities were required to report to TRI. As part of the transition to NAICS codes, the auxiliary facility designation no longer applies under TRI. Auxiliary facilities are separate facilities, whose primary function is to support a facility that is covered by TRI.

These facilities – such as warehouses or maintenance facilities – would take on the SIC code of the facility that they supported. Therefore, these auxiliary facilities had met the first requirement under TRI based on the facility's SIC code. Auxiliary facilities would then need to determine whether or not they had 10 or more full time employees and whether or not they exceeded any chemical threshold, and if so, they would be required to report to TRI as a separate facility. Under the new NAICS code system, auxiliary facilities no longer take on the SIC code of the facility that they support. Instead, they would keep the non-TRI covered NAICS code designation that best describes the activities that are actually taking place at the facility.

## Slide 15 Section III: Exemptions Guidance

Duration: 00:00:05

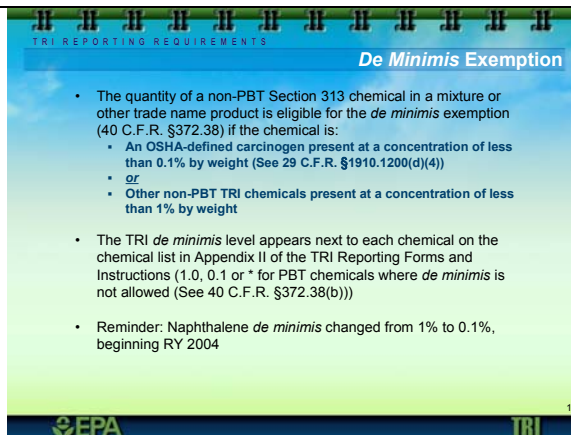


### Notes:

## Slide 16

### Exemptions Guidance

Duration: 00:01:20



TRI REPORTING REQUIREMENTS

#### De Minimis Exemption

- The quantity of a non-PBT Section 313 chemical in a mixture or other trade name product is eligible for the *de minimis* exemption (40 C.F.R. §372.38) if the chemical is:
  - An OSHA-defined carcinogen present at a concentration of less than 0.1% by weight (See 29 C.F.R. §1910.1200(d)(4))
  - or
  - Other non-PBT TRI chemicals present at a concentration of less than 1% by weight
- The TRI *de minimis* level appears next to each chemical on the chemical list in Appendix II of the TRI Reporting Forms and Instructions (1.0, 0.1 or \* for PBT chemicals where *de minimis* is not allowed (See 40 C.F.R. §372.38(b)))
- Reminder: Naphthalene *de minimis* changed from 1% to 0.1%, beginning RY 2004

EPA TRI

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### Notes:

Now let's look at key points that facilities should understand about the exemptions to TRI threshold determinations and reporting that were discussed in the Basic Concepts module of this online training.

First, let's look at the de minimis exemption. Under the de minimis exemption, the quantity of a non-PBT TRI chemical in a mixture or other trade name product would not need to be considered for threshold determination and reporting if – in the case of an OSHA-defined carcinogen, the TRI chemical is present at a concentration less than 0.1% by weight. Or in the case of non-OSHA-defined carcinogen at a concentration of less than 1% by weight. The de minimis concentrations are provided for each chemical on the TRI chemical list, which is Table II of the reporting forms and instructions. It is also available from the TRI assistance library and the TRI-ME reporting software. Recently, in the 2004 reporting year, the de minimis concentration for naphthalene changed from 1% to 0.1% as that chemical became an OSHA-defined carcinogen.

## Slide 17

### De Minimis Exemption

Duration: 00:00:57



TRI REPORTING REQUIREMENTS

#### De Minimis Exemption

HOW IT WORKS...

- De minimis* exemption can apply to non-PBT chemicals:
  - In mixtures or trade name products processed or otherwise used
  - Only 2 manufacturing activities:
    - Coincidentally manufactured as impurities that remain in products
    - Imported in mixtures or other trade name products
- De minimis* exemption DOES NOT apply to:
  - Manufacturing chemicals (in most cases), including by-products manufactured coincidentally as a result of manufacturing, processing, otherwise use, or any other waste management activities
  - Wastes received from off-site
  - PBT chemicals (except for supplier notification)

EPA TRI

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### Notes:

So how does the de minimis exemption work? The de minimis exemption can apply to non-PBT chemicals that are in mixtures of trade name products that are processed or otherwise used. It can also apply to two manufacturing activities: coincidentally manufacturing when the TRI chemical remains as an impurity in the product; and importing the mixture containing the TRI chemical. In other words, the de minimis exemption does not apply to manufacturing of chemicals in most cases, including coincidentally manufacturing of TRI chemicals when they do not remain in the product. The de minimis exemption does not apply to wastes, including those that are received from off-site for the purpose of waste management. Also, the de minimis exemption does not apply to PBT chemicals.

## Slide 18

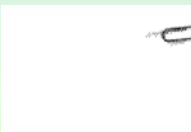
### PBT Chemicals and the De Minimis Exemption

Duration: 00:00:55

TRI REPORTING REQUIREMENTS

#### PBT Chemicals and the *De Minimis* Exemption

- PBT chemicals are not eligible for the *de minimis* exemption except for purposes of supplier notification.
  - Even though a supplier is not required to notify users of the presence of a PBT chemical if it is below the *de minimis* concentration, the user is still required to consider all quantities of PBT chemicals!
- No other EPCRA section 313 exemptions were modified by the PBT rule.



EPA TRI

### Notes:

While chemical users cannot apply the *de minimis* exemption for PBT chemicals, suppliers of PBT chemicals are not required to notify users of the presence of TRI chemicals, including PBT chemicals, that are below the *de minimis* concentration.

If a facility has information on the presence of PBT chemicals in mixtures that they receive from a supplier, they should use that information for determining whether or not a threshold was exceeded and any subsequent reporting. If a facility has no information as to the presence of a PBT chemical in a mixture received from a supplier, they would not need to consider it.

Again, the *de minimis* exemption cannot be used for PBT chemicals. However, all other exemptions apply to both PBT and non-PBT chemicals.

## Slide 19

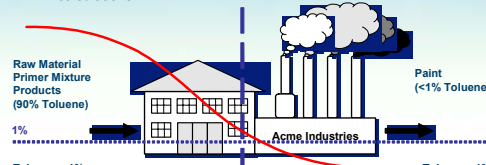
### De Minimis Exemption: How It Works... (cont.)

Duration: 00:01:08

TRI REPORTING REQUIREMENTS

#### De Minimis Exemption: How It Works... (cont.)

- Processing a non-PBT Section 313 chemical in a mixture to below the *de minimis* concentration does **NOT** exempt the chemical from threshold determinations and release calculations



Raw Material Primer Mixture Products (90% Toluene)

1%

Toluene  $\geq$  1%

Acme Industries

Paint (<1% Toluene)

Toluene < 1%

- De minimis exemption does **NOT** apply
- Threshold determination required
- Release calculations required

- De minimis exemption does **NOT** apply
- Threshold determination required
- Release calculations still required

EPA TRI

### Notes:

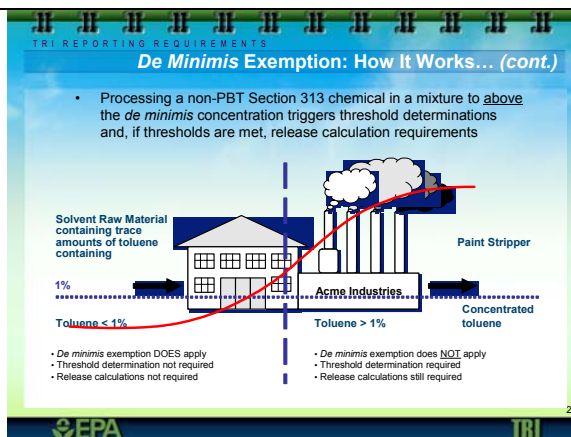
Let's look at a couple of examples for which the *de minimis* exemption can and cannot be used. First, let's say we have a raw material coming into a facility and the raw material is 90% toluene. So in this case it comes into the facility above the *de minimis* concentration for toluene of 1%. However, during the process, the concentration of the toluene in the production process decreases to a level less than 1% or below the *de minimis* concentration. Would we be able to apply the *de minimis* exemption?

*De minimis* would not apply in this situation, even after the point where the concentration of the toluene goes below the 1% *de minimis*. Once the TRI chemical is above the *de minimis* concentration, the *de minimis* exemption cannot be taken for that chemical mixture. So, in this case the facility would need to consider the toluene towards its activity thresholds, and towards any release or waste management reporting required.

## Slide 20

### De Minimis Exemption: How It Works... (cont.)

Duration: 00:01:03



### Notes:

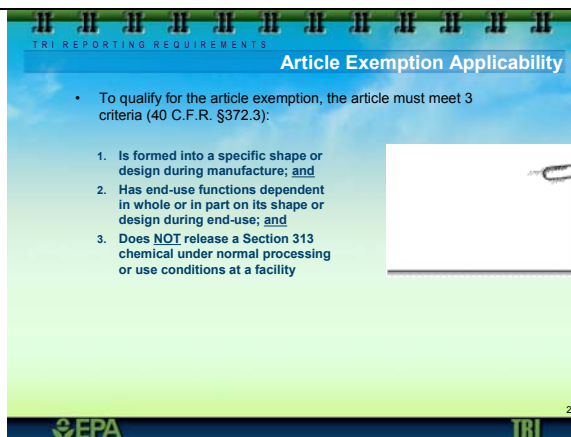
Let's look at the opposite situation where we again have toluene but this time it is coming into the facility in a raw material at a concentration below the de minimis and it's getting concentrated through the process to a level that is above the de minimis concentration. In this case the de minimis exemption can be applied to the mixture at any point before it goes above de minimis concentration. However, as soon as it goes above that concentration, it must be considered towards your threshold determination in any release or waste management reporting. So again, all the toluene before it goes above de minimis concentration would be considered exempt from threshold determination and reporting.

However, after it goes above the de minimis concentration, the TRI requirements get turned on and the facility would need to consider the toluene toward the threshold determination in any subsequent reporting.

## Slide 21

### Article Exemption Applicability

Duration: 00:00:38



### Notes:

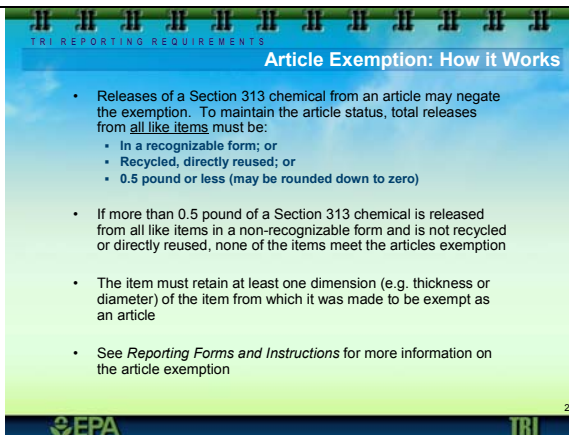
Next, let's look at the articles exemption. TRI chemicals contained in articles are exempt from TRI. There are three criteria that must be met to be considered an article under TRI. First, an article is formed into a specific shape or design during its manufacture. Second, an article has an end-use function that is dependent in whole or in part on that shape or design. And, third, an article does not release a TRI chemical under normal processing or use conditions at the facility.



## Slide 22

### Article Exemption: How it Works

Duration: 00:01:17



**Article Exemption: How it Works**

- Releases of a Section 313 chemical from an article may negate the exemption. To maintain the article status, total releases from all like items must be:
  - In a recognizable form; or
  - Recycled, directly reused; or
  - 0.5 pound or less (may be rounded down to zero)
- If more than 0.5 pound of a Section 313 chemical is released from all like items in a non-recognizable form and is not recycled or directly reused, none of the items meet the article's exemption
- The item must retain at least one dimension (e.g. thickness or diameter) of the item from which it was made to be exempt as an article
- See *Reporting Forms and Instructions* for more information on the article exemption

### Notes:

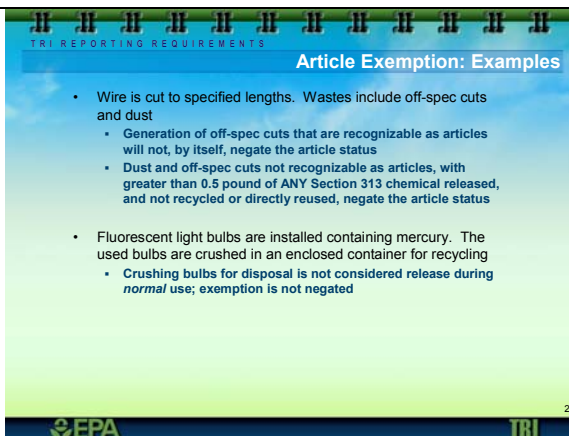
Lets look closer at the requirement of not releasing a TRI chemical under normal processing and use conditions. If a TRI chemical is released from an article during its normal use, it very well may negate the article's exemption. In order to maintain the article's status, the total TRI chemicals released from all like articles or like items must be either: 1) in a recognizable form, or 2) recycled directly or directly reused, or 3) must be less than half a pound. In a recognizable form means that the releases from the article must still look like and be recognized as pieces of the article.

In other words, if more than half a pound of TRI chemical is released from all the like items used at the facility in the course of the year, and the releases are not in a recognizable form, and they are not recycled or directly reused, none of the items meet the article exemption. Also, to maintain a recognizable form, the article must maintain its thickness or diameter to be considered exempt as an article.

## Slide 23

### Article Exemption: Examples

Duration: 00:01:27



**Article Exemption: Examples**

- Wire is cut to specified lengths. Wastes include off-spec cuts and dust
  - Generation of off-spec cuts that are recognizable as articles will not, by itself, negate the article status
  - Dust and off-spec cuts not recognizable as articles, with greater than 0.5 pound of ANY Section 313 chemical released, and not recycled or directly reused, negate the article status
- Fluorescent light bulbs are installed containing mercury. The used bulbs are crushed in an enclosed container for recycling
  - Crushing bulbs for disposal is not considered release during *normal use*; exemption is not negated

### Notes:

Here is an example of an operation in which wire is cut into specified lengths. Wire itself would be considered an article, but in cutting the wire to the specified lengths, there is some waste of off-spec cuts and some dust. The generation of the off-spec cuts that are still recognizable as pieces of wire will not by themselves negate the article's status. Quantities of the dust and off-spec cuts that are not recognizable as pieces of wire and that are greater than half a pound for any TRI chemical and not recycled or directly reused would negate the article status.

Let's look at an example where a facility uses fluorescent light bulbs which contain mercury, a TRI chemical. When the bulbs are no longer of use, they are crushed prior to recycling. In this case the fluorescent bulbs would still be exempt as articles. The normal use of the fluorescent bulbs does not release mercury. Crushing of the bulbs may release mercury, but that is not considered normal use of the bulb, so the exemption is not negated. Note that the mercury in the bulbs is exempt from TRI reporting, but other regulatory requirements associated with the proper management of waste fluorescent bulbs should be followed.

## Slide 24

### Article Exemption

Duration: 00:00:38

- Article Exemption is often inappropriately used!
  - A useful rule of thumb is that when metals are machined, cut, or ground, in any manner, the article exemption may not be applicable.
- The article exemption does NOT apply to the manufacture of articles.

### Notes:

Facilities need to be careful that they do not inappropriately use the articles exemption. Because it only takes ½ pound of TRI chemical released or disposed of over the course of a year to negate the articles status, often when metals containing TRI chemicals are machined, cut, or ground, in any manner, the article exemption would not apply. Also the article exemption does not apply to the actual manufacturing of articles. The articles need to be brought in from a supplier and processed or otherwise used at the facility.

## Slide 25

### Exemption Guidance

Duration: 00:01:26

Reminder:

- Section 313 chemicals in fuels added to motor vehicles not operated by facility do not qualify for the motor vehicle maintenance exemption
  - Considered toward processing threshold
- Laboratory activities exemption only applies to certain activities that take place in a laboratory

### Notes:

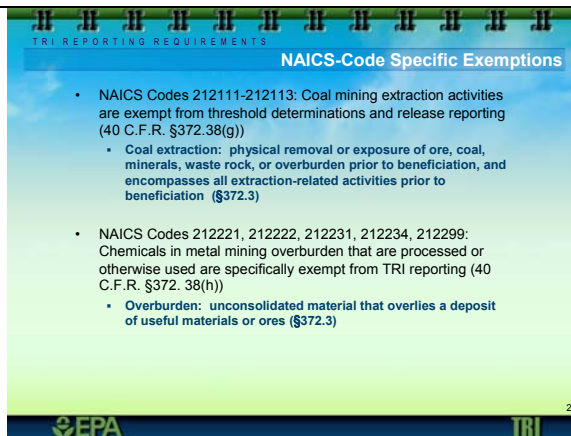
The Basics Concepts module of the online training goes into more detail on each of the TRI exemptions, but here we have a few reminders. First, the TRI chemicals in fuels added to motor vehicles not operated by the facility do not qualify for the motor vehicle maintenance exemption. They would be considered towards the processing threshold and this exemption only applies to the otherwise use of TRI chemicals. For example, some facilities that manufacture vehicles add a few gallons of fuel before the vehicles leave the facility for distribution into commerce. Because those vehicles are not operated by the facility, the chemicals in the fuel are considered processed.

Similarly, the laboratory activities exemption only applies to the otherwise use of TRI chemicals in certain activities that take place in a laboratory. Facilities should take care not to apply this exemption more broadly than it should be. If an activity involving a TRI chemical takes place in a laboratory, it does NOT mean that it is necessarily exempt. Only certain activities are exempt. More information on all of the TRI reporting exemptions can be found in the "Reporting Forms and Instructions" document.

## Slide 26

### NAICS-Code Specific Exemptions

Duration: 00:00:41



**NAICS-Code Specific Exemptions**

- NAICS Codes 212111-212113: Coal mining extraction activities are exempt from threshold determinations and release reporting (40 C.F.R. §372.38(g))
  - Coal extraction: physical removal or exposure of ore, coal, minerals, waste rock, or overburden prior to beneficiation, and encompasses all extraction-related activities prior to beneficiation (§372.3)
- NAICS Codes 212221, 212222, 212231, 212234, 212299: Chemicals in metal mining overburden that are processed or otherwise used are specifically exempt from TRI reporting (40 C.F.R. §372.38(h))
  - Overburden: unconsolidated material that overlies a deposit of useful materials or ores (§372.3)

EPA TRI 26

### Notes:

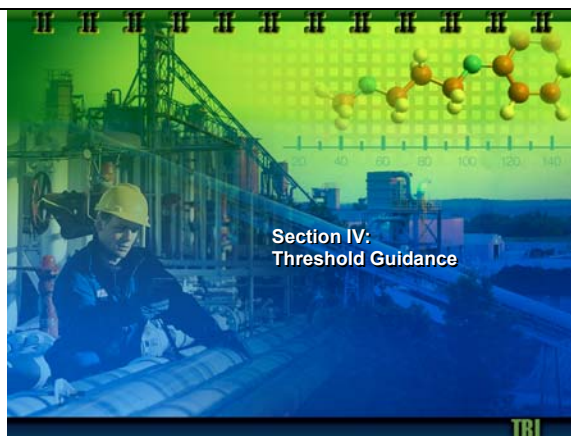
There are also a number of industry-specific, or NAICS-code specific exemptions. The first one applies to certain coal mining activities that would be exempt from threshold determinations and release reporting. For coal mining, the exempt activities include the physical removal or exposure of the ore or coal prior to the beneficiation of the material.

Similarly, certain metal mining activities are also exempt from TRI reporting. In this case, TRI chemicals in the overburden, or the unconsolidated material that overlies the deposits, are exempt from reporting.

## Slide 27

### Section IV: Threshold Guidance

Duration: 00:00:05



**Section IV:  
Threshold Guidance**

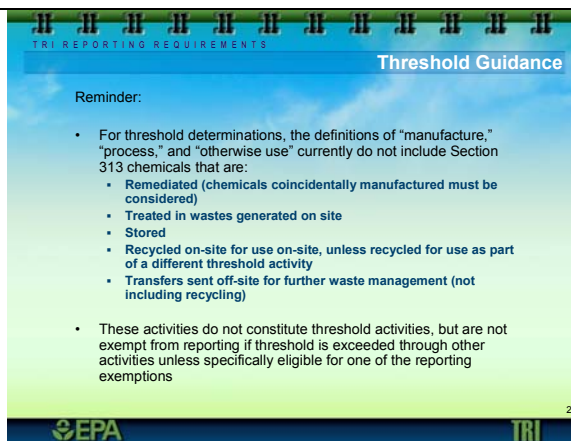
TRI

### Notes:

## Slide 28

### Threshold Guidance

Duration: 00:02:23



TRI REPORTING REQUIREMENTS

#### Threshold Guidance

Reminder:

- For threshold determinations, the definitions of "manufacture," "process," and "otherwise use" currently do not include Section 313 chemicals that are:
  - Remediated (chemicals coincidentally manufactured must be considered)
  - Treated in wastes generated on site
  - Stored
  - Recycled on-site for use on-site, unless recycled for use as part of a different threshold activity
  - Transfers sent off-site for further waste management (not including recycling)
- These activities do not constitute threshold activities, but are not exempt from reporting if threshold is exceeded through other activities unless specifically eligible for one of the reporting exemptions

EPA TRI

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### Notes:

Now we will go over some reminders regarding threshold calculations. Facilities should be aware that there are some activities that are not considered to be threshold activities under TRI. In other words, the activities are not considered manufacturing, processing, or otherwise use. None of the TRI chemicals associated with these activities would need to be considered towards an activity threshold. These activities are shown here and include: remediating chemicals; treating chemicals in waste generated on-site; storing chemicals; recycling on-site for use on-site; and transfers sent off-site for further waste management, not including recycling.

For example, let's say a facility stores 50,000 pounds of a chemical onsite. The act of just storing that chemical is not a threshold activity. It's not manufacturing. It's not processing. It's not otherwise use. However the fact that they are storing the chemical on-site probably means that they are also using it in their process. At some point they will pull quantities out of storage and process or otherwise use it in their production process. At that point they are processing the quantity of the chemical removed from storage, and that quantity gets counted towards their processing threshold. However, if the facility were to stop making a certain product line and continued to store the chemical for the reporting year and never used it, they would not need to consider it towards any threshold.

Facilities should be aware that while these activities are not threshold activities, that is not the same as being exempt from TRI. The activities listed here are not exempt from reporting; but they are not counted toward the threshold determination. However, if a TRI chemical threshold was exceeded in some other manner at a facility, a TRI form would be required for that chemical. Any release and waste management reporting for that chemical would need to include any releases or other waste management associated with these activities.



## Slide 29

### Threshold Guidance - Combustion

Duration: 00:00:40

**Threshold Guidance - Combustion**

- Section 313 chemicals may be coincidentally manufactured during combustion of:
  - Oil
  - Coal
  - Natural gas
  - Waste
  - Other materials
- Any Section 313 chemicals in fuel considered otherwise used

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#### Notes:

Here is some guidance on combustion. Many facilities have on-site combustion processes where TRI chemicals may be present in in fuels used, and may be coincidentally manufactured during the combustion of oil, coal, natural gas, waste or other materials. Any TRI chemical in the fuel is considered otherwise used and the quantity would be applied towards the otherwise use threshold. Any TRI chemical generated when the fuel is combusted is considered coincidentally manufactured and the quantity would be applied to the manufacturing threshold.

## Slide 30

### Threshold Guidance - Combustion

Duration: 00:01:13

**Threshold Guidance - Combustion**

Reminder:

- Section 313 chemicals coincidentally manufactured (including those manufactured during activities covered under "otherwise use" exemptions) must be considered towards the manufacturing threshold
  - Includes acid aerosols and metal compounds manufactured as by-products of fuel combustion

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#### Notes:

Again, those TRI chemicals coincidentally manufactured during combustion must be considered towards the manufacturing threshold. Any TRI chemicals contained in fuels combusted are otherwise used and count toward the otherwise use threshold.

The non-PBT TRI chemicals in the fuel otherwise used is eligible for the de minimis exemption, and many of the TRI chemicals found in fuels DO exist below de minimis concentrations. However, TRI chemicals that are coincidentally manufactured during combustion will not fall under the de minimis exemption.

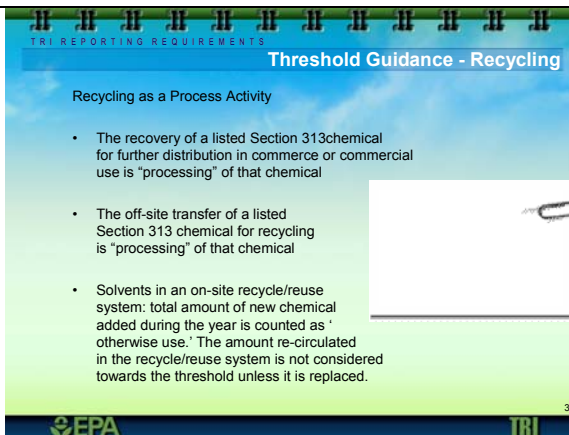
Common TRI chemicals coincidentally manufactured during combustion include acid aerosols, such as sulfuric acid aerosols. Metal compounds are also coincidentally manufactured as byproducts of fuel combustion.

So, when combusting fuels and other materials, be sure to consider both aspects of the combustion process: How much of each TRI chemical is otherwise used, and how much is manufactured?

## Slide 31

### Threshold Guidance - Recycling

Duration: 00:01:44



**Threshold Guidance - Recycling**

Recycling as a Process Activity

- The recovery of a listed Section 313 chemical for further distribution in commerce or commercial use is "processing" of that chemical
- The off-site transfer of a listed Section 313 chemical for recycling is "processing" of that chemical
- Solvents in an on-site recycle/reuse system: total amount of new chemical added during the year is counted as 'otherwise use.' The amount re-circulated in the recycle/reuse system is not considered towards the threshold unless it is replaced.

EPA TRI 31

### Notes:

Off-site recycling is considered a process activity, because a TRI chemical is being recovered for further distribution in commerce or for commercial use. The quantities of TRI chemical recycled off-site, therefore, count toward the processing threshold. If the threshold is exceeded, the quantity of the TRI chemical sent offsite for recycling is entered into Section 6.2 as an offsite transfer.

Many facilities use solvents containing TRI chemicals in systems that continually recycle or reuse the solvent onsite. The onsite recycling is not counted towards the processing threshold. However, the solvents are being otherwise used over and over. In this case, only the amount of new chemical added to the system during the reporting year would be counted towards the otherwise use threshold.

Facilities should be aware of the difference between recycling and reuse of TRI chemicals. Materials sent off-site for direct reuse are considered processed, similar to how the materials that are incorporated into your product are processed. Therefore, quantities of a TRI chemical sent offsite for direct reuse are not reported on the TRI form as an offsite transfer – they are not included anywhere on the Form R as a release or managed as waste – just as chemicals in the end-product are not included anywhere on the Form R. Off-site recycling, however, is reported on the TRI Form R.

## Slide 32

### Section V: Form A Eligibility

Duration: 00:00:05



**Section V: Form A Eligibility**

TRI

### Notes:

### Slide 33

#### Form A Eligibility

Duration: 00:00:45

- Alternate Threshold Rule (Revised for RY 2006)
- If alternate threshold criteria met:
  - Have the option to file a Form A in lieu of a Form R
  - No detailed release, other waste management, or source reduction reporting
  - Submit certification statement (Form A)
  - Maintain records and calculations used to determine Form A eligibility
- TRI Burden Reduction Rule, announced December 18, 2006, expands eligibility for use of Form A.

#### Notes:

The alternative threshold rule – as described in the Basic Concepts Module of this online training – was new for reporting year 2006. This rule expanded the eligibility for the use of the Form A certification. On a chemical-by-chemical basis, if a facility meets the criteria for using a Form A, they can file it instead of a Form R; they do not need to file a Form R. The Form A can provide significant burden reduction because it does not require release or other waste management or source reduction information. It mainly is comprised of Part one of the Form R and the name and the CAS number of the chemical.

### Slide 34

#### Alternate Threshold Rule (Non-PBT Chemicals)

Duration: 00:00:48

- Criteria for submitting a Form A for non-PBT chemicals
  - Do not exceed 1,000,000 pounds of the toxic chemical manufactured, processed, or otherwise used.
  - Do not exceed 5,000 pounds for the total waste management (i.e., releases including disposal, recycling, energy recovery, and treatment) of the Section 313 chemical.\*
  - Do not exceed 2,000 pounds of releases including disposal (i.e., Section 8.1 and any releases in Section 8.8 of the Form R)

\*Equivalent to the sum of the quantities calculated for Sections 8.1 - 8.8 of the Form R

#### Notes:

The criteria for use of Form A varies depending on whether or not the chemical is PBT chemical or not. For non-PBT chemicals, in order to use the Form A, a facility must meet the following criteria. First, the facility cannot exceed one million pounds of the chemical manufactured, processed, or otherwise used. Second, the facility cannot exceed 5,000 pounds for the total waste management of the TRI chemical. And by waste management, again, we mean the releases, recycling, energy recovery, and treatment of the TRI chemical. And the facility cannot exceed 2,000 pounds of the TRI chemical released or disposed.

### Slide 35

#### Alternate Threshold Rule (PBT Chemicals)

Duration: 00:00:46

- Criteria for submitting a Form A for PBT chemicals
  - Do not exceed 1,000,000 pounds manufactured, processed, or otherwise used.
  - Cannot use for dioxin and dioxin-like compounds
  - No disposal or other releases into the environment of the PBT chemical (i.e., Section 8.1 and any releases reported in Section 8.8)
  - The total amount of the chemical managed by treatment, energy recovery, and/or recycling is not more than 500 pounds.\*

\*Equivalent to the sum of the quantities calculated for Sections 8.2 - 8.7 and any non-release quantities in Section 8.8 of the Form R

#### Notes:

In previous years, Form A was not allowed for PBT chemicals. Starting in reporting year 2006, the Form A can be used for PBT chemicals, provided the following criteria are met. First, the facility cannot exceed one million pounds of the TRI chemical, manufactured, processed, or otherwise used. Second, it cannot be used for dioxin and dioxin-like compounds. Third, there can be no releases or other disposal into the environment of the PBT chemical. And fourth, facilities cannot exceed 500 pounds for recycling, energy recovery, and treatment of the TRI chemical.

## Slide 36

### Quiz 1

Duration: 00:02:00

## Articulate Quizmaker Quiz Placeholder - Quiz 1

## Slide 37

### Basis of Estimate Codes

Duration: 00:01:31

**Basis of Estimate Codes**

- One of the following RY 2007 updated "Basis of Estimate" codes must be listed on the Form R for each release and waste management quantity reported:
  - Continuous monitoring (M1)
  - Periodic or random monitoring (M2)
  - Mass balance calculation (C)
  - Published emissions factors (E1)
  - Site-specific emissions factors (E2)
  - Engineering calculations (O)
    - Everything NOT M1, M2, C, E1, or E2 above, such as:
      - Best engineering judgment
      - Equipment efficiency specs
      - Non-chemical-specific and non-published emission factors
- Use the code on the Form R for the method used to estimate the largest portion of the release

EPA TRI

### Notes:

For each chemical quantity entered in Sections 5 and 6 of the Form R, facilities must also indicate how the quantity was estimated by entering a "basis of estimate" code. Note that beginning in RY2007, the number of basis of estimates codes has increased to the six shown here. Is the estimate based on data from a continuous monitoring system? If so, enter a Basis of Estimate code of M1. Enter "M2" if the estimate is based upon periodic or random monitoring. Is the estimate based on a mass balance calculation? That would be a Basis of Estimate Code of C. If the quantity is based on a published emission factor, then enter "E1" as the Basis of Estimate code. E2 is for site-specific emissions factors that are non-published, that were perhaps developed through in-house testing, or were provided by the vendor of your process or pollution control equipment. The last code, "O", is for "other" and is used for engineering calculations. O is also any other method that is not covered by the other codes.


In some cases, the quantity entered on the TRI Form could be based on multiple estimation techniques. In these cases, enter the basis of estimate code that represents the largest portion of the estimate.



**Slide 38**   
**Section VI: Release and Waste Management Reporting Guidance**  
Duration: 00:00:05



**Notes:**

**Slide 39**   
**Release and Waste Management Reporting Guidance**  
Duration: 00:01:22

**Release Estimates**

- Tips for accurate release estimates
  - Always use your best available information
  - Estimate the quantity of Section 313 chemical, not the entire waste stream
  - Differentiate fugitive from stack air emissions
  - Zero air emissions for VOCs are unlikely
  - Watch out for releases of Section 313 chemicals with qualifiers
  - Check your math and document your work!
- Result of release estimation errors
  - Incorrect release estimates and inconsistencies could carry over from year to year

**Notes:**

Here are a few helpful hints for estimating release and waste management quantities reported on the Form R.

First, consider all sources of information and use the best available information for release and waste management estimates.

Be sure to estimate the quantity of the TRI chemical and not the entire waste stream. For example, when using data from a waste manifest that shows the weight of the entire waste mixture sent off-site, be sure to base release and waste management estimates on only the amount of the TRI chemical in that waste mixture.

Be sure to differentiate between your fugitive and your stack air emissions.

When reporting for a VOC, or volatile organic compound, be sure to estimate fugitive losses of the chemical – it is unlikely to have zero fugitive air emissions.

Pay attention to the TRI chemical qualifiers and remember that the form of the chemical described in the qualifier is the only form that needs to be considered for TRI.

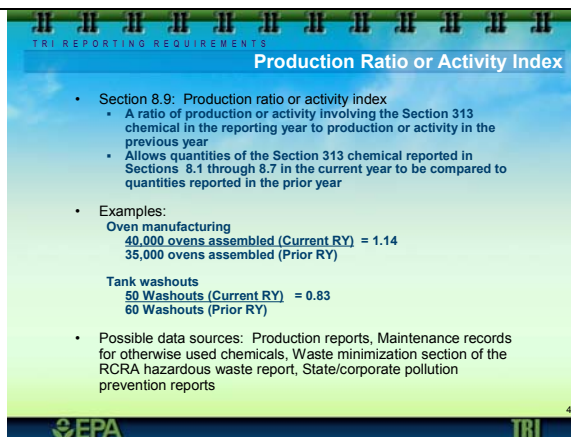
Also, always check your math and document your work.

Be aware that errors can carry over from year to year.

## Slide 40

### Production Ratio or Activity Index

Duration: 00:03:43



The slide features a header with a row of 12 icons and the text 'TRI REPORTING REQUIREMENTS'. Below this is a title bar 'Production Ratio or Activity Index'. The main content area has a light blue background with a list of bullet points. The first bullet point is 'Section 8.9: Production ratio or activity index', which includes two sub-bullets: 'A ratio of production or activity involving the Section 313 chemical in the reporting year to production or activity in the previous year' and 'Allows quantities of the Section 313 chemical reported in Sections 8.1 through 8.7 in the current year to be compared to quantities reported in the prior year'. The second bullet point is 'Examples:', which includes two examples: 'Oven manufacturing' with the calculation  $\frac{40,000 \text{ ovens assembled (Current RY)}}{35,000 \text{ ovens assembled (Prior RY)}} = 1.14$ , and 'Tank washouts' with the calculation  $\frac{50 \text{ Washouts (Current RY)}}{60 \text{ Washouts (Prior RY)}} = 0.83$ . The third bullet point is 'Possible data sources: Production reports, Maintenance records for otherwise used chemicals, Waste minimization section of the RCRA hazardous waste report, State/corporate pollution prevention reports'. The slide footer includes the EPA logo on the left and the TRI logo on the right, with the number '40' in the bottom right corner.

- Section 8.9: Production ratio or activity index
  - A ratio of production or activity involving the Section 313 chemical in the reporting year to production or activity in the previous year
  - Allows quantities of the Section 313 chemical reported in Sections 8.1 through 8.7 in the current year to be compared to quantities reported in the prior year
- Examples:
  - Oven manufacturing
    - $\frac{40,000 \text{ ovens assembled (Current RY)}}{35,000 \text{ ovens assembled (Prior RY)}} = 1.14$
  - Tank washouts
    - $\frac{50 \text{ Washouts (Current RY)}}{60 \text{ Washouts (Prior RY)}} = 0.83$
- Possible data sources: Production reports, Maintenance records for otherwise used chemicals, Waste minimization section of the RCRA hazardous waste report, State/corporate pollution prevention reports

### Notes:

The production ratio or activity index for the chemical goes in Section 8.9 of the Form R. The production ratio is a unitless value that compares this year's production involving this chemical to last year's production. This helps facilities examine trends in their quantities released and managed. For example, releases could be decreasing over time because pollution prevention is being implemented resulting in increased efficiency. Or releases could be decreasing because production is going down. Let's go through a couple of examples to illustrate this.

The first example is an oven manufacturer, and at this facility 40,000 ovens were assembled this reporting year, compared to 35,000 ovens assembled in the prior reporting year. So dividing 40,000 by 35,000 results in a production ratio of 1.14. This is a unitless value. 1.14 would represent a 14% increase in production from last year to this year. But neither 14, or 0.14 should be reported. Only 1.14, the actual ratio, should be reported. Perhaps the TRI chemical use has no connection to production. Alternatively, facilities may use an activity index instead of a production ratio. In the activity index example shown here, a chemical is used in tank washouts. There were 50 washouts this year compared to 60 the last year. That would result in an activity index of 0.83.

The facility must decide if a production ratio or an activity index best reflects the use of the chemical for which they are reporting. For example, if the facility is reporting on a chemical that is in the paint used to paint ovens, using the number of ovens would be a good production ratio. As they make more ovens, they are going to be using proportionally more of the paint, if they do not implement any pollution prevention practices. However, if the chemical is used in a cleaning solution to clean tanks, it may be that the facility is increasing production by running larger jobs that require fewer cleanings. Production is not a good indicator of the year-to-year use of that chemical, so they would opt for using an activity index instead.

If a facility does implement pollution prevention practices, they still may see their chemical use remain the same even though their production ratio is greater than one, meaning their production is going up. That would indicate they are using less of the chemical per unit of product.

## Slide 40 - Continued Production Ratio or Activity Index

Duration: 00:03:43

### Notes:

Another note, this number can never be negative (since we are dividing two positive numbers). If production is going up, the production ratio is going to be greater than one. If production is going down, the production ratio or activity index is going to be less than one, as in the tank washout example. Barring significant changes in production or activities at a facility, most production ratios and activity indexes are within 0.5 and 2, which would indicate a 50 percent decrease and a 100 percent increase in production or activities, respectively.

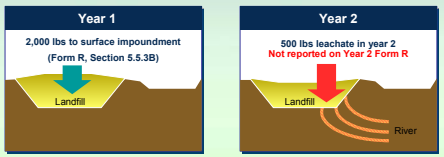
## Slide 41 Chemical Migration Guidance

Duration: 00:01:00

TRI REPORTING REQUIREMENTS

### Chemical Migration Guidance

- Migration of a Section 313 chemical contained in waste released (including disposal) may occur:
  - Migration of reportable chemical within one environmental medium (e.g., leachate from landfill)
    - Only required to report initial release of chemical to the environment



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### Notes:

Now we will discuss EPA's Interpretive Guidance on how to report chemicals that migrate between media. Shown is an example of a reportable chemical that is disposed of in an on-site surface impoundment. In Year One, 2000 pounds of this chemical were disposed of in the on-site surface impoundment. That 2000 pounds will go on your Form R as an onsite land disposal, under the surface impoundment section. A year later, leachate from this surface impoundment has migrated to the river, and you know that 500 pounds of the original 2000 pounds has migrated to the river. Because the migration occurred in a different reporting year, the 500 pounds to water does not go on your Form as a direct discharge. The 500 pounds does not go on the Year Two Form at all. It was already reported the previous year in the 2000 pounds disposed to land onsite.

## Slide 42

### Chemical Migration Guidance

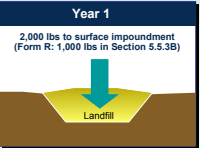
Duration: 00:01:12

**Chemical Migration Guidance**

- Migration of a Section 313 chemical contained in waste released (including disposal) may occur:
  - Migration of chemical from one environmental medium to another (e.g., volatilization from a landfill) within the reporting year
    - Release estimates should be calculated and reported for all media in Part II, Sections 5, 6, and 8 of Form R

**Year 1**

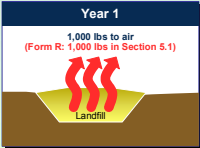
2,000 lbs to surface impoundment  
(Form R: 1,000 lbs in Section 5.3.35)



Landfill



**Year 1**

1,000 lbs to air  
(Form R: 1,000 lbs in Section 5.1)



Landfill

**NOTE:** If 500 additional lbs of the Year 1 disposal were volatilized in Year 2, 500 lb of air release should be reported in Section 5.1 of the Year 2 form.

### Notes:

On the other hand, if in Year One, a facility placed 2,000 pounds of the chemical into a surface impoundment, and in the same year, 1,000 pounds volatilized to the air, the facility would put the 1,000 pounds to air on their Form R as an air release. And 1,000 pounds would be reported on the Form R as disposed of in the surface impoundment, not 2000 pounds.

When the initial disposal and subsequent migration occur during the same reporting year, they are able to put each amount in the appropriate section of the form to show the medium that it actually ended up in.

Also, note that when a TRI chemical migrates from one environmental medium to another (for example, from land to air) in different years, the quantity of TRI chemical migrating to the different environmental medium should be estimated and reported on the TRI Form. This is the case even if some or all of that chemical had already been reported as being disposed or released to the original medium in previous years.



## Slide 43

### Metals and Metal Compound Category

Duration: 00:01:47

**Metals and Metal Compound Category**

- Elemental metals and metal compound categories are separately listed chemicals under Section 313
  - Separate activity threshold determinations
  - Report for each listing (e.g., nickel or nickel compound) only if the threshold for each listing is exceeded
- If threshold exceeded for both the elemental metal and metal category compound (e.g., nickel and nickel compounds), you have options to report separately or file one combined report
  - If combined, file as metal category compound
  - The reason both the elemental metal and its compound may be reported on the same compound form is that while the entire weight of the compound is used to determine the threshold, only the amounts of the parent metal are reported on Form R.


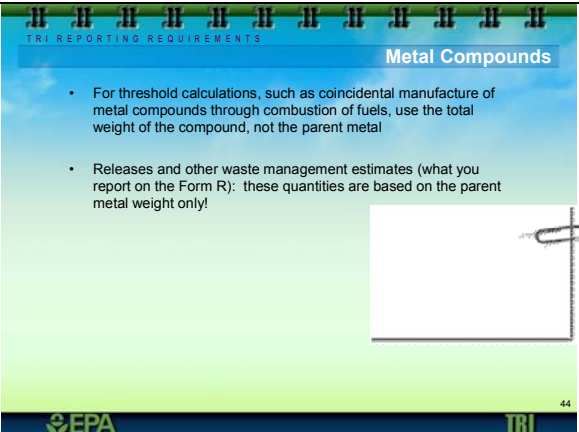
 

### Notes:

Now let's look at the unique requirements associated with reporting for metals and metal compound categories. Note that metals and metal compound category are separately listed chemicals under TRI. They each have a separate activity threshold determination – report on the metal only if the threshold for the metal is exceeded, and report for the metal compound only if the threshold for the metal compound is exceeded.

So if a facility handles elemental nickel and nickel compounds at their facility, they should look at the two separately when determining if they need to report. They look at the elemental nickel and see if they manufacture, process, or otherwise use quantities exceeding the threshold for nickel. Separately, they look at their nickel compounds and see if the quantity manufactured, processed, or otherwise used exceeds the threshold for nickel compounds. They look at the two as completely unrelated chemicals.

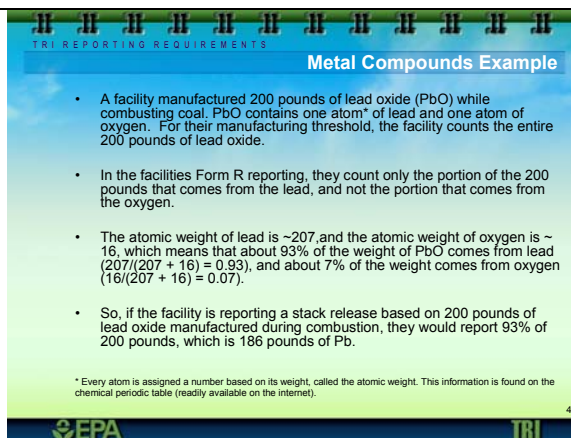


<p><b>Slide 43 - Continued</b>  <b>Metals and Metal Compound Category</b>  Duration: 00:01:47</p>		<p><b>Notes:</b></p> <p>However, if the threshold is exceeded for both the elemental metal and for the metal compound – for example, both for nickel and for nickel compounds, then the option exists to either report separately or to file in one combined form. When combining the reports, the single report should be for the metal compound category. So, if the facility exceeded the threshold for nickel and they exceeded the threshold for nickel compounds, they could file for each separately, or they could file for the combined elemental nickel releases and releases from the nickel compounds on one report.</p>
<p><b>Slide 44</b>   <b>Metal Compounds</b>  Duration: 00:00:28</p>		<p><b>Notes:</b></p> <p>When determining threshold quantities for metal compounds, use the total weight of the compound, not just the parent metal portion. In other words, when calculating how much of the metal compound was manufactured or processed or otherwise used, use the weight of the compound as a whole. For release and other waste management estimates – that's the information that goes on the Form R – use just the weight of the parent metal.</p>

## Slide 45

### Metal Compounds Example

Duration: 00:01:18



- A facility manufactured 200 pounds of lead oxide (PbO) while combusting coal. PbO contains one atom\* of lead and one atom of oxygen. For their manufacturing threshold, the facility counts the entire 200 pounds of lead oxide.
- In the facilities Form R reporting, they count only the portion of the 200 pounds that comes from the lead, and not the portion that comes from the oxygen.
- The atomic weight of lead is ~207, and the atomic weight of oxygen is ~16, which means that about 93% of the weight of PbO comes from lead ( $207/(207 + 16) = 0.93$ ), and about 7% of the weight comes from oxygen ( $16/(207 + 16) = 0.07$ ).
- So, if the facility is reporting a stack release based on 200 pounds of lead oxide manufactured during combustion, they would report 93% of 200 pounds, which is 186 pounds of Pb.

\* Every atom is assigned a number based on its weight, called the atomic weight. This information is found on the chemical periodic table (readily available on the internet).

EPA TRI 45

### Notes:

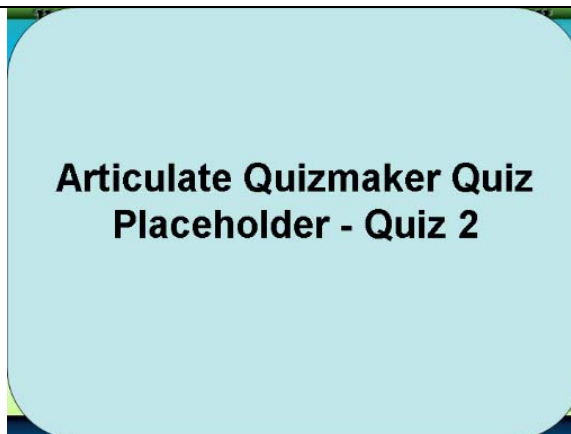
Let's look at an example where a facility coincidentally manufactured 200 pounds of lead oxide during the combustion of coal. First, they check to see if they have exceeded a threshold. They count the entire 200 pounds of lead oxide, not just the parent metal lead, towards their manufacturing threshold for lead compounds. Because the threshold is 100 pounds, they have exceeded the reporting threshold and will have to submit a TRI form for lead compounds.

Now, when estimating the quantities of TRI chemical managed as waste for the TRI form R, they only report the quantity of lead contained in the lead compounds. Using the atomic weight of lead, which is about 207, and that of oxygen, which is about 16, they determine that the lead makes up 93% of the weight of the lead oxide. Therefore, if the facility determines that all 200 pounds of the lead oxide was released up the stack, they would report 93% of 200 pounds, or 186 pounds as a stack release on their TRI Form R.

## Slide 46

### Quiz 2

Duration: 00:02:00



Articulate Quizmaker Quiz Placeholder - Quiz 2

**Slide 47**  
**Metal Cyanide  
Compounds Guidance**  
Duration: 00:01:10

**Metal Cyanide Compounds Guidance**

- A metal cyanide compound, such as cadmium cyanide, requires separate reporting under both cadmium and cyanide\*
  - For reporting cadmium, use entire weight of compound for threshold determinations, and only weight of metal portion of compound for release and other waste management reporting
  - For reporting cyanide, use weight of entire compound for threshold determinations and weight of entire compound for release and other waste management reporting

\* Qualifier for cyanide compounds states:  $X^+CN^-$ , where  $X=H^+$  or any other group where a formal dissociation may occur. For example,  $KCN$  or  $Ca(CN)_2$

EPA TRI 47

**Notes:**

“Metal cyanide compounds” is a chemical category on the TRI list. Facilities that manufacture, process, or otherwise use a metal cyanide compound, need to consider if they exceed the threshold under the metal cyanide compound category and also under the corresponding metal compound category.

For example, if a facility processes cadmium cyanide, they need to consider if reporting is required under both cadmium compounds and cyanide compounds. In this example, they would use the entire weight of the cadmium cyanide for the cadmium compound category threshold determination and only the weight of the metal portion, or cadmium, for the release and waste management reporting. For reporting under the cyanide compounds category, they would also use the entire weight for the cadmium cyanide in the threshold determination, just like for the metal compound. For the release and other waste management, they also use the entire weight of the cadmium cyanide, unlike when reporting under the metal compound category.

**Slide 48**  
**Section VII: PBT and  
Chemicals for Special  
Consideration**  
Duration: 00:00:05

**Section VII:  
PBT and Chemicals for Special  
Consideration**

TRI

**Notes:**

## Slide 49

### PBT and Chemicals for Special Consideration

Duration: 00:01:34

**PBT Chemicals and Thresholds**

- PBT chemicals are subject to separate and lower thresholds (See 40 C.F.R. § 372.28)

**PBT Thresholds**

- 100 lbs./yr or less (manufactured, processed, or otherwise used)**
  - Aldrin
  - Lead\*
  - Lead Cmpds.
  - Methoxychlor
  - Pendimethalin
  - Polycyclic Aromatic Cmpds.
  - Tetrabromobisphenol A
  - Trifluralin
- 10 lbs./yr or less (manufactured, processed, or otherwise used)**
  - Chlordane
  - Heptachlor
  - Mercury
  - Toxaphene
  - Isodrin
  - PCBs
  - Benzo(g,h,i)perylene
  - Hexachlorobenzene
  - Mercury compounds
  - Octachlorostyrene
  - Pentachlorobenzene
- 0.1 g/yr or less (manufactured, processed, or otherwise used)**
  - Dioxin and dioxin-like compounds

\* Excluding lead in stainless steel, brass, or bronze

### Notes:

PBT chemicals are those chemicals that are persistent bioaccumulative and toxic, meaning that they're persistent in that they don't break down in the environment. They're bioaccumulative in that they tend to accumulate in living tissue, and they're toxic chemicals. So because of these characteristics, these chemicals have unique reporting requirements under TRI.

Here are the 20 chemicals that are designated as PBTs. 8 of them are pesticides, 8 are aromatic compounds, 2 are metals and 2 are metal compounds. Several of these PBT chemicals are either banned or severely limited in their use. There are different thresholds depending on whether or not the chemical is "highly" persistent, bioaccumulative and toxic. Those chemicals have a 10 lb/year reporting threshold. That category includes mercury and PCBs. A 100 lb/year threshold applies to another group of PBTs shown here. Lastly, dioxin and dioxin-like compounds have a reporting threshold on 0.1 gram per year.

This is the only place in TRI reporting where you'll see a unit other than pounds. Dioxin is reported in grams and the threshold is in grams. Everywhere else in TRI, the units are "pounds."

## Slide 50

### Polychlorinated Biphenyls (PCBs)

Duration: 00:00:43

**Polychlorinated Biphenyls (PCBs)**

- PBT activity threshold: 10 pounds
- Manufacturing: PCBs may be manufactured as a product of incomplete combustion (PIC)
- Processing: Recycling or reuse of PCBs
- Otherwise use:
  - On-site treating or disposing PCB-contaminated waste received from off-site
  - Combusting PCB-contaminated oil

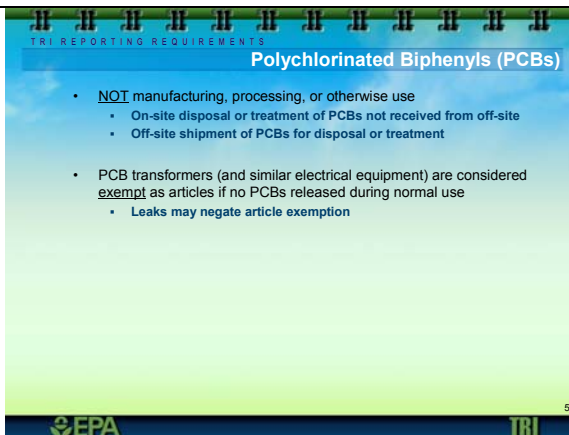
### Notes:

Polychlorinated Biphenyls (PCB's) have a reporting threshold of 10 pounds. Facilities should consider where in their process that they may be using or generating PCBs. PCBs can be manufactured as a byproduct of incomplete combustion. Be aware that recycling of PCBs is considered processing. Also, using PCBs by: adding them into your process equipment; treating them on-site; or disposing of PCB-contaminated waste received from off-site – or combusting PCB-contaminated oil; are all counted towards the otherwise use threshold.



## Slide 51 Polychlorinated Biphenyls (PCBs)

Duration: 00:01:11



TRI REPORTING REQUIREMENTS

### Polychlorinated Biphenyls (PCBs)

- NOT manufacturing, processing, or otherwise use
  - On-site disposal or treatment of PCBs not received from off-site
  - Off-site shipment of PCBs for disposal or treatment
- PCB transformers (and similar electrical equipment) are considered exempt as articles if no PCBs released during normal use
  - Leaks may negate article exemption

EPA TRI 51

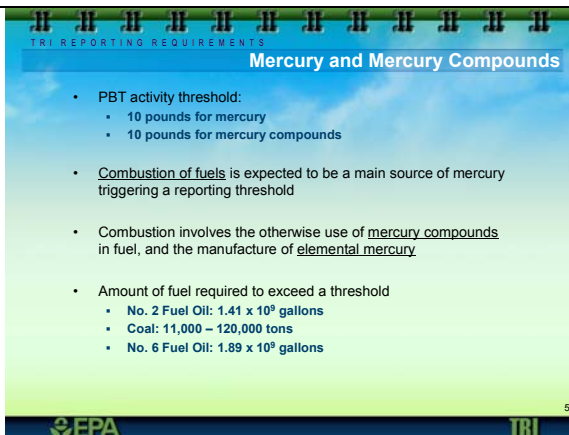
### Notes:

Many facilities ask about how they should report when they ship an old PCB-containing transformer offsite for disposal. PCB transformers are considered exempt as articles if no PCB's are released during their normal use. Note that leaks may negate that article exemption. Also, shipping a product offsite for disposal is not a manufacturing, processing or otherwise use activity— in other words, it is not a threshold activity. Other activities that are not threshold activities include on-site disposal or treatment of PCBs not received from off-site or the off-site shipment of PCB's for disposal or treatment.

So, facilities with old transformers that contain PCBs, and that are just getting rid of them by sending them off-site for disposal, would not need to report on the PCBs, assuming they had no other sources of PCBs at the facility. Just shipping a waste off-site for the purposes of further waste management is not a threshold activity.

## Slide 52 Mercury and Mercury Compounds

Duration: 00:02:24



TRI REPORTING REQUIREMENTS

### Mercury and Mercury Compounds

- PBT activity threshold:
  - 10 pounds for mercury
  - 10 pounds for mercury compounds
- Combustion of fuels is expected to be a main source of mercury triggering a reporting threshold
- Combustion involves the otherwise use of mercury compounds in fuel, and the manufacture of elemental mercury
- Amount of fuel required to exceed a threshold
  - No. 2 Fuel Oil:  $1.41 \times 10^8$  gallons
  - Coal: 11,000 – 120,000 tons
  - No. 6 Fuel Oil:  $1.89 \times 10^8$  gallons

EPA TRI 52

### Notes:

Next are mercury and mercury compounds. The PBT activity threshold is 10 pounds for mercury and it is 10 pounds for mercury compounds. Recall that mercury and mercury compounds are two separately listed TRI chemicals. The combustion of fuels is the main source of mercury triggering reporting to TRI. Combustion typically involves the otherwise use of mercury compounds in fuels and the manufacture of elemental mercury.

If you do not know the mercury compound present in a fuel, EPA recommends using mercurous oxide for threshold calculations of otherwise use. In the absence of better information, EPA also recommends that facilities assume that all releases and other waste management quantities of mercury from the combustion of coal are in the form of elemental mercury.

Combustion involves the otherwise use of mercury compounds in fuels and the manufacture of elemental mercury. EPA has developed a mercury guidance document that provides the amounts of fuels required to exceed the 10 pound threshold for typical concentrations of mercury in those fuels.

## Slide 52 - Continued Mercury and Mercury Compounds

Duration: 00:02:24

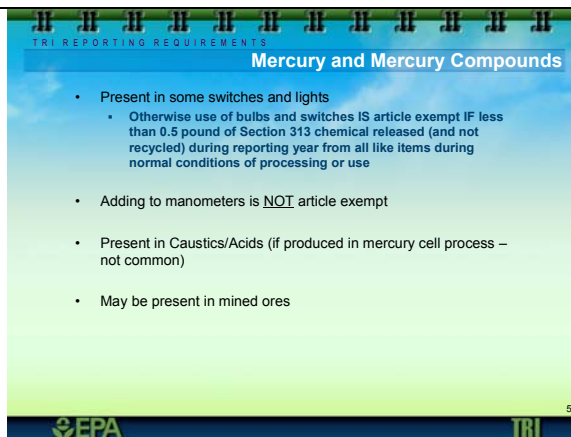
### Notes:

However, if a facility has better, more specific information on the fuel that they are actually using, they should base their calculations on that information. If they do not have other information, they can use the default information in the mercury guidance.

Some information from that guidance document is shown here. For example, in the case of No. 2 fuel oil, you would need to use about 1.41 billion gallons of Number 2 fuel oil to exceed the reporting threshold, IF the concentration of mercury in the fuel oil was 1 part per Billion. For Number 6 fuel oil, it would take about 1.89 billion gallons. So, this helps give a sense of whether reporting might be required. Alternatively, if the uses of these fuels is not even close to these quantities and there are no other sources of mercury at the facility, reporting would probably not be required.

## Slide 53 Mercury and Mercury Compounds

Duration: 00:01:10



**TRI REPORTING REQUIREMENTS**  
**Mercury and Mercury Compounds**

- Present in some switches and lights
  - Otherwise use of bulbs and switches IS article exempt IF less than 0.5 pound of Section 313 chemical released (and not recycled) during reporting year from all like items during normal conditions of processing or use
- Adding to manometers is NOT article exempt
- Present in Caustics/Acids (if produced in mercury cell process – not common)
- May be present in mined ores

EPA TRI 53

### Notes:

Here are a few other things to consider regarding mercury. In addition to petroleum products, mercury and mercury compounds might be found in switches and lights. Note, however, that the otherwise use of bulbs and switches would be exempt as an article if you are not a bulb or switch manufacturer AND less than half a pound of the mercury is released during the reporting year from all like items during normal conditions of processing or use.

For example, if a facility purchases and installs mercury switches in a piece of equipment that they manufacture, it would likely meet the article exemption, as long as they did not have releases associated all the switches that totaled more than half a pound a year. If mercury is being added to an instrument, that would not be covered by the article exemption.

Facilities should also be aware that mercury might be present in caustics and acids – if it is produced using the mercury cell process, which is not now common. In addition, mined ores may be another source of mercury.

**Slide 54**  
**PACS and Benzo(g,h,i)perylene**  
 Duration: 00:01:19

**PACS and Benzo(g,h,i)perylene**

- PBT activity threshold
  - PAC category threshold: 100 pounds
  - Benzo(g,h,i)perylene threshold: 10 pounds
- Present in coal, fuel oil, other petroleum products, such as asphalt and roofing tars
- Asphaltic concrete (blacktop) typically contains 4 - 10% paving asphalt
- Most uses of blacktop are **NOT EXEMPT**
  - Process areas and roadways – **NOT EXEMPT**
  - Employee parking lot – **EXEMPT**
- See also EPA's PACs guidance ([http://www.epa.gov/tri/guide\\_docs/2001/pacs2001.pdf](http://www.epa.gov/tri/guide_docs/2001/pacs2001.pdf))

EPA TRI

**Notes:**

PACS and Benzo(g,h,i)perylene are both PBT's. The PACS have a 100 pound threshold. The Benzo(g,h,i)perylene has a 10 pound threshold. These chemicals are usually found in the same sources including in coal, fuel oil, petroleum products, and roofing tars. These chemicals can also be coincidentally manufactured during the combustion of fossil fuels.

Because they are found in asphalt, they are typically present in blacktop. Blacktop used for paving an employee parking lot is exempt under the structural exemption, but other uses of blacktop at a facility probably are not because these uses are process-related. For example, blacktop used for roadways that trucks use to bring materials in and product out of the facility would not be exempt.

Again, as with most of the PBT chemicals, EPA has developed a guidance document that provides much more information on PACs and Benzo(g,h,i)perylene along with specific examples that will help facilities determine their requirements associated with these chemicals.

**Slide 55**  
**Dioxin and Dioxin-like Compounds**  
 Duration: 00:01:28

**Dioxin and Dioxin-like Compounds**

- PBT activity threshold = 0.1 gram manufacture, process, or otherwise use for the entire reporting year!
- Dioxins formed as unwanted byproducts when chlorinated materials involved in combustion or other high-temperature processes, such as:
  - Fossil fuel and wood combustion
  - Waste incineration
  - Metallurgical processes
- What it takes to exceed the 0.1 gram activity threshold?
  - 64,500 tons of coal combusted in a utility boiler
  - 8.33 million gallons of fuel oil combusted in a utility boiler
  - 1,230 tons copper scrap fed to a secondary copper smelter

EPA TRI

**Notes:**

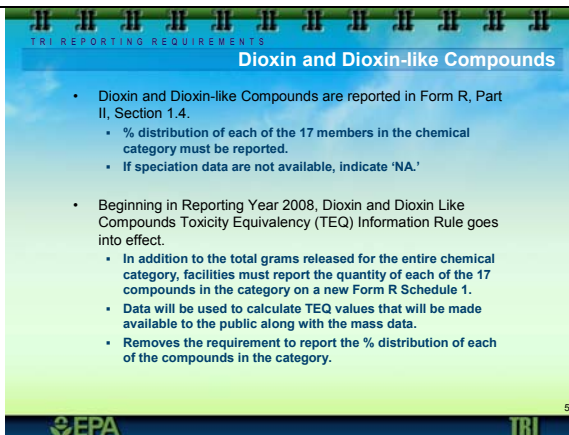
"Dioxin and Dioxin-like Compounds" is a category of PBTs. The category has a PBT activity threshold of 0.1 grams for a reporting year. Facilities manufacturing, processing or otherwise using 1/10th of a gram of dioxin or dioxin-like compounds, would report for this chemical category. Dioxins can be formed as byproducts when chlorinated materials are involved in combustion or other high-temperature processes. Examples of such processes where dioxins may form include: fossil fuel and wood combustion, waste incineration, or metallurgical processes.

What does it take to exceed a 0.1 gram activity threshold? The list shown here is from the dioxin and dioxin-like compounds guidance document. Using typical concentrations, 64,500 tons of coal combusted in a utility boiler in the reporting year would exceed the dioxin threshold. 8.33 million gallons of fuel combusted would exceed the threshold, again, at typical concentrations of dioxins in the fuel. Or 1,230 tons of copper scrap fed into a secondary copper smelter would exceed the dioxin threshold.

## Slide 56

### Dioxin and Dioxin-like Compounds

Duration: 00:01:00



**Dioxin and Dioxin-like Compounds**

- Dioxin and Dioxin-like Compounds are reported in Form R, Part II, Section 1.4.
  - % distribution of each of the 17 members in the chemical category must be reported.
  - If speciation data are not available, indicate 'NA.'
- Beginning in Reporting Year 2008, Dioxin and Dioxin Like Compounds Toxicity Equivalency (TEQ) Information Rule goes into effect.
  - In addition to the total grams released for the entire chemical category, facilities must report the quantity of each of the 17 compounds in the category on a new Form R Schedule 1.
  - Data will be used to calculate TEQ values that will be made available to the public along with the mass data.
  - Removes the requirement to report the % distribution of each of the compounds in the category.

### Notes:

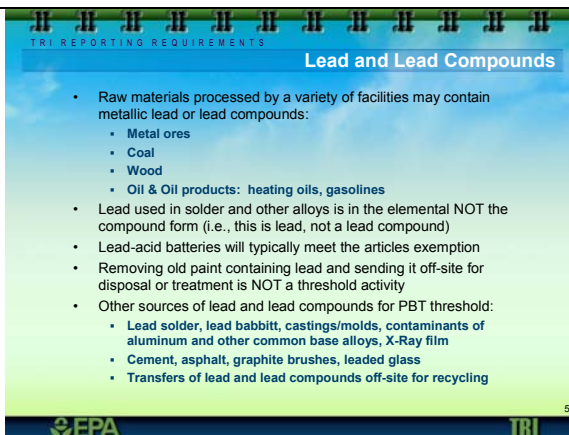
When completing a TRI Form R for dioxin and dioxin-like compounds, note that Section 1.4 of Part two of the form needs to be completed. This section of the form is used when reporting on this chemical category. In this section, facilities report the % distribution of each of the 17 individual chemicals in the chemical category.

For reporting year 2008, there will be changes related to the reporting of dioxin and dioxin-like compounds. In addition to reporting on the grams of the chemical category managed as waste, facilities must report the quantity of each of the 17 compounds in the category on a new Form R Schedule 1. These data will be used to calculate toxicity equivalency values, which will be made available to the public along with the actual weights.

## Slide 57

### Lead and Lead Compounds

Duration: 00:01:41



**Lead and Lead Compounds**

- Raw materials processed by a variety of facilities may contain metallic lead or lead compounds:
  - Metal ores
  - Coal
  - Wood
  - Oil & Oil products: heating oils, gasolines
- Lead used in solder and other alloys is in the elemental NOT the compound form (i.e., this is lead, not a lead compound)
- Lead-acid batteries will typically meet the articles exemption
- Removing old paint containing lead and sending it off-site for disposal or treatment is NOT a threshold activity
- Other sources of lead and lead compounds for PBT threshold:
  - Lead solder, lead babbitt, castings/molds, contaminants of aluminum and other common base alloys, X-Ray film
  - Cement, asphalt, graphite brushes, leaded glass
  - Transfers of lead and lead compounds off-site for recycling

### Notes:

“Lead and Lead Compounds” – this is the most commonly reported TRI chemical. It is found in a variety of raw materials, such as in metal ores, coal, wood, and in oil products such as heating oils and gasoline.

Lead is also found in circuit board facilities where it is used as solder. And, lead is found in many metal alloys. Lead in solder and alloys is in the elemental, not the compound form. So, facilities using lead solder and metal alloys should consider the quantities of elemental lead in these materials. Lead acid batteries would typically meet the articles exemption, assuming there are no TRI chemical releases associated with the lead acid batteries.

Old paint can also contain lead. However, removing old paint containing lead and sending it off-site for disposal or treatment is not considered a threshold activity under TRI. Simply transferring a waste containing a TRI chemical off-site for waste management other than recycling is not in itself a threshold activity.

Other sources of lead and lead compounds that facilities should consider: lead as contaminants in aluminum or other base alloys. Lead in X-ray film, cement, asphalt, graphite brushes, and leaded glass. Also, transferring of lead or lead compounds off-site for recycling is counted as processing.

## Slide 58

### Lead and Lead Compounds

Duration: 00:00:39

**Lead and Lead Compounds**

- PBT activity threshold:
  - 100 pounds for lead (not contained in stainless steel, brass, or bronze)
  - 100 pounds for lead compounds
- Non-PBT activity threshold
  - Non-PBT thresholds apply to lead contained in stainless steel, brass, or bronze\*
    - 25,000 lbs for manufacture or process
    - 10,000 lbs for otherwise use

\*If elemental lead is removed from the qualified alloy, such as vaporization during melting of an alloy, the 100 lb threshold applies

## Notes:

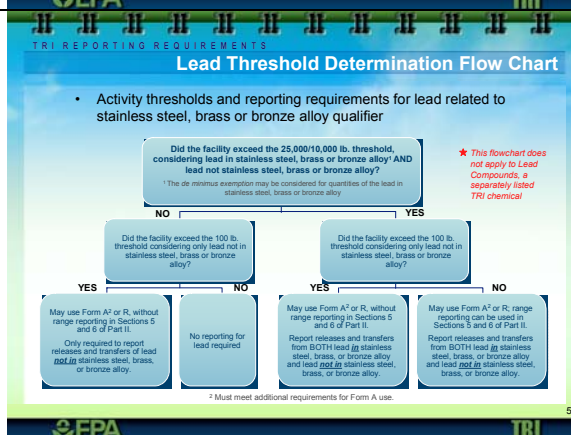
Elemental lead that is not contained in stainless steel, brass or bronze alloys is considered a PBT and has a 100 pound threshold. The lead compounds category always has a 100-pound threshold.

There is also a non-PBT activity threshold for lead and that applies only to lead that is contained in stainless steel, brass, or bronze. In this case the non-PBT chemical thresholds apply, or 25,000 pounds for manufacturing and processing, and 10,000 pounds for otherwise use.

## Slide 59

### Lead Threshold Determination Flow Chart

Duration: 00:01:53



## Notes:

Because there are two different ways to look at lead, for facilities that have both lead in stainless steel, brass and bronze, AND lead not in these alloys, this flowchart can be helpful in determining which thresholds have been exceeded and what reporting requirements apply.

The first step is to quantify all of the lead manufactured processed or otherwise used at the facility, including lead in stainless steel, brass or bronze and lead in the PBT form and compare that to the non-PBT thresholds of 25,000 and 10,000 pounds. Then the facility looks only at lead not in stainless steel, brass, or bronze and compares that to the 100 pound threshold for the PBT form of lead.

Following this flow chart, if neither threshold is exceeded, then no reporting is required. If only the threshold for the PBT form of lead is exceeded then the facility is only required to report on the lead not in stainless steel, brass, or bronze and must follow the reporting requirement specific to PBT chemicals. If only the threshold for the non-PBT form of lead is exceeded, then the facility reports on both the lead in the stainless steel, brass or bronze and the lead not in these alloys, and they follow the reporting requirements for non-PBT chemicals. Finally, if both the thresholds for the PBT form of lead and the threshold for the non-PBT form of lead are exceeded, then the flowchart shows that the facility must report on both forms of lead and must follow the reporting requirements for PBT chemicals.



## Slide 60

### Quiz 3

Duration: 00:02:00

## Articulate Quizmaker Quiz Placeholder - Quiz 3

## Slide 61

### Nitrate Compounds

Duration: 00:01:37

**TRI REPORTING REQUIREMENTS**

### Nitrate Compounds

- Water dissociable nitrate compounds category
  - Reportable only when in aqueous solution
  - For threshold determinations, use weight of entire nitrate compound
  - Calculate only weight of nitrate ion portion when reporting releases and other waste management quantities on Form R
  - Nitrate compounds are produced most commonly when nitric acid is neutralized or in biological treatment of wastewater
  - Intake water exemption may apply for nitrates drawn from environmental sources

EPA TRI 61

### Notes:

Now we will move on to some other chemicals that, while not PBT chemicals, have either unique reporting requirements or for which reporting errors more frequently occur. First, let's look at the nitrate compounds category. The TRI chemical category is actually 'water dissociable nitrate compounds'. So, nitrate compounds are only reportable when they are in an aqueous solution.

Nitrate compounds are treated much like metal compounds under TRI. When calculating whether a reporting threshold was exceeded, facilities use the weight of the entire nitrate compound to see if they have manufactured or processed more than 25,000 pounds, or otherwise used more than 10,000 pounds.

If one of these thresholds is exceeded, a TRI form is required. When estimating the quantities released or managed as waste, use only the nitrate ion portion of the compound. A common error is using the whole weight of the nitrate compound in the release and waste management estimates, and thereby, over-reporting the pounds released or the pounds managed as waste.

Nitrate compounds are most commonly produced when nitric acid is neutralized, or in biological treatment of wastewater. There is an exemption for intake water – nitrates drawn from environmental sources or from city water are exempt.

## Slide 62

### Quiz 4

Duration: 00:02:00

## Articulate Quizmaker Quiz Placeholder - Quiz 4

## Slide 63

### Ammonia Guidance

Duration: 00:01:11

TRI REPORTING REQUIREMENTS

### Ammonia Guidance

- Ammonia
  - Requires threshold determination and release and other waste management quantity calculations for aqueous ammonia from any source (i.e., anhydrous ammonia placed in water or water dissociable ammonium salts) be based on 10% of the total ammonia present in aqueous solutions
  - Anhydrous ammonia - include 100% for thresholds and releases
    - Including air releases from aqueous ammonia
  - Effective RY 1994

63

EPA TRI

### Notes:

Ammonia also has some unique requirements. For aqueous ammonia, threshold determinations and release and waste management quantity calculations are based on 10% of the ammonia present in the aqueous solutions. Remember that the 10% applies only to aqueous solutions. In the case of anhydrous ammonia, facilities need to consider 100% for thresholds and releases.

Let's look at an example. If in a calendar year, a facility places 20,000 lbs of anhydrous ammonia in water for processing and processes 25,000 lbs of aqueous ammonia from an ammonium salt. The facility must include all of the 20,000 lbs of anhydrous ammonia in the determination of the processing threshold, but only 10 percent (or 2,500 lbs) of the aqueous ammonia from the ammonium salt in the processing threshold determination. Therefore, total ammonia processed is 22,500 pounds which is below the reporting threshold.

## Slide 64

### Acid Aerosols

Duration: 00:01:44

**Acid Aerosols**

- Hydrochloric and sulfuric acids have a chemical qualifier...they are reportable only if in the aerosol form.
  - These aerosols are common combustion products of coal and other fuels combustion.
- Threshold determination for closed-loop acid reuse systems (sulfuric and hydrochloric acid only).
  - Acid aerosol manufactured and otherwise used
  - Simplified method of estimating quantity for threshold determination:

Total Amount of Acid in Reuse System

+

Total Virgin Acid Added in RY

=

Amount Acid Aerosols Manufactured/ Otherwise Used

\* See EPA's Guidance for Reporting Sulfuric Acid and Guidance for Reporting Hydrochloric Acid for specific calculations

EPA TRI

### Notes:

Acid aerosols are also chemicals with unique requirements. Note that both hydrochloric and sulfuric acids have a chemical qualifier that specifies that they are reportable only if they are in the aerosol form. These aerosols are common products of coal and other fuel combustion. For example, sulfuric acid can be coincidentally manufactured when combusting fuels containing sulfur.

Hydrochloric and sulfuric acids are also used by facilities in closed-loop acid reuse systems. In some cases the acid can be aerosolized to apply it to a material or product for the purpose of etching or cleaning. The acid aerosol is typically condensed back to liquid only to be reaerosolized again and again. Because of the chemical qualifier, facilities would be manufacturing the TRI chemical every time it is aerosolized and otherwise using it again and again in the process.

EPA developed a simplified method for estimating the quantity that should be applied to the threshold. The guidance directs facilities to calculate their threshold quantity by adding the total amount of acid in the reuse system plus the total virgin acid added in the reporting year to get the threshold quantity manufactured and otherwise used.

EPA has developed two separate reporting guidance documents for sulfuric acid and hydrochloric acid where facilities can get more information pertaining to these chemicals.

## Slide 65

### Chemical List Changes

Duration: 00:00:36

**Chemical List Changes**


Pending Changes

- Diisononyl Phthalate category addition
  - Proposal, comment period closed October 12, 2005
- Delistings under consideration
  - MIBK
  - Acetonitrile
  - Chromium Compounds

EPA TRI


### Notes:

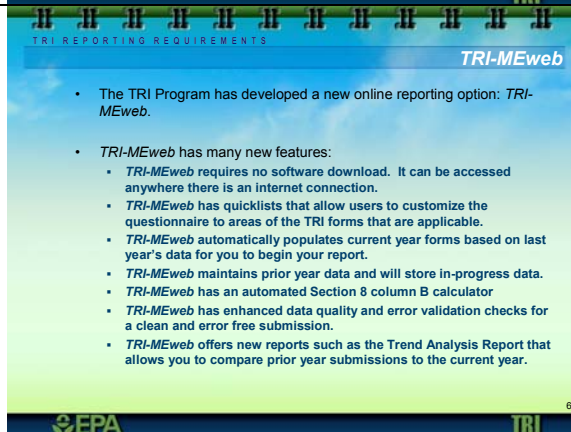
The TRI chemical list includes over 600 chemicals and chemical categories. Periodically, there are changes to the list, so it's important to check for updates every year. There are no new chemical list changes specific to reporting year 2007. As for other pending changes – there is a chemical category addition under consideration. And petitions have been submitted for EPA to consider several other delistings. None of these are final at this point. They're just under consideration.

**Slide 66**   
**Section VIII: TRI  
Program Information**  
Duration: 00:00:05



**Notes:**

**Slide 67**   
**TRI Program  
Information**  
Duration: 00:01:05



- The TRI Program has developed a new online reporting option: *TRI-MEweb*.
- *TRI-MEweb* has many new features:
  - *TRI-MEweb* requires no software download. It can be accessed anywhere there is an internet connection.
  - *TRI-MEweb* has quicklists that allow users to customize the questionnaire to areas of the TRI forms that are applicable.
  - *TRI-MEweb* automatically populates current year forms based on last year's data for you to begin your report.
  - *TRI-MEweb* maintains prior year data and will store in-progress data.
  - *TRI-MEweb* has an automated Section 8 column B calculator
  - *TRI-MEweb* has enhanced data quality and error validation checks for a clean and error free submission.
  - *TRI-MEweb* offers new reports such as the Trend Analysis Report that allows you to compare prior year submissions to the current year.

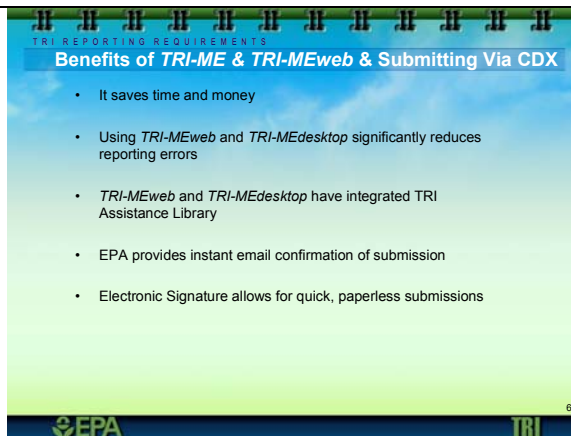
**Notes:**

TRI Program is developing a new online reporting option called TRI-MEweb. This is in addition to TRI-ME desktop software that many TRI covered facilities are familiar with and which is still available for download from the TRI website. TRI-MEweb is a web application that will have much the same functionality of the TRI-ME software and a number of new features. It will automatically populate current year forms, based on your last year's data, so you can start out with that information. It has enhanced data quality and error validation checks that will help to make sure you submit a clean and error-free report. And it has a few tools that you can use such as a Trends Analysis Report that allows you to compare your prior year submissions to the current year form. TRI-MEweb and regular TRI-ME software are both available from the TRI Website.

## Slide 68

### Benefits of TRI-ME & TRI-MEweb & Submitting Via CDX

Duration: 00:00:54



**Benefits of TRI-ME & TRI-MEweb & Submitting Via CDX**

- It saves time and money
- Using *TRI-MEweb* and *TRI-MEdesktop* significantly reduces reporting errors
- *TRI-MEweb* and *TRI-MEdesktop* have integrated TRI Assistance Library
- EPA provides instant email confirmation of submission
- Electronic Signature allows for quick, paperless submissions

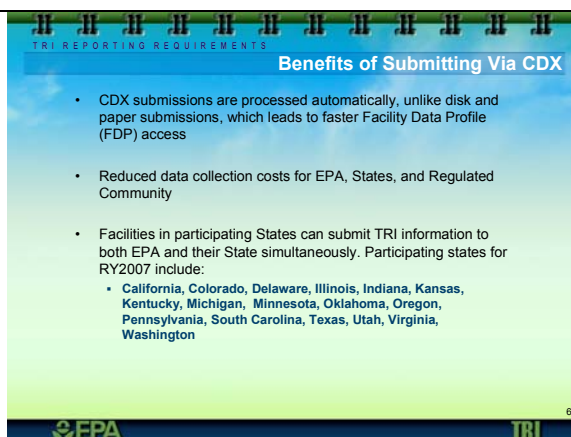
## Notes:

EPA would like to encourage the use of TRI-ME desktop and TRI-ME web reporting applications and the submittal of TRI reports via EPA's Central Data Exchange. It saves time and money for the reporting facilities and for the EPA. Both TRI-ME desktop and TRI-ME web have the TRI assistance library integrated within the software so that facilities have ready access to information and guidance. Using the TRI-ME software has been proven to significantly reduce reporting errors. When submitting via the CDX, facilities receive instant e-mail confirmation that EPA has received their submission. And submitting via the CDX uses an electronic signature that will allow for paperless submission.

## Slide 69

### Benefits of Submitting Via CDX

Duration: 00:00:32



**Benefits of Submitting Via CDX**

- CDX submissions are processed automatically, unlike disk and paper submissions, which leads to faster Facility Data Profile (FDP) access
- Reduced data collection costs for EPA, States, and Regulated Community
- Facilities in participating States can submit TRI information to both EPA and their State simultaneously. Participating states for RY2007 include:
  - California, Colorado, Delaware, Illinois, Indiana, Kansas, Kentucky, Michigan, Minnesota, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Utah, Virginia, Washington

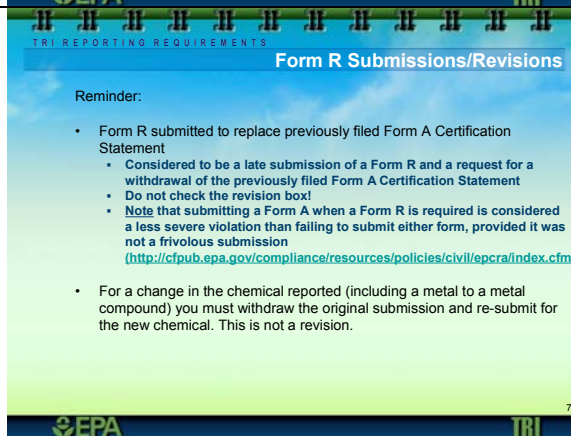
## Notes:

Submissions via the CDX are processed automatically, unlike the disk and paper submission, which means you receive your facility data profile much faster. Again, it reduces the cost of data collections for EPA, the state, as well as facilities and companies that need to report to TRI. For facilities in those states that are CDX capable, a submittal of their TRI forms to EPA automatically fulfills their state obligations.

## Slide 70

### Form R Submissions/Revisions

Duration: 00:00:55



**Form R Submissions/Revisions**

Reminder:

- Form R submitted to replace previously filed Form A Certification Statement
  - Considered to be a late submission of a Form R and a request for a withdrawal of the previously filed Form A Certification Statement
  - Do not check the revision box!
  - Note that submitting a Form A when a Form R is required is considered a less severe violation than failing to submit either form, provided it was not a frivolous submission (<http://cfpub.epa.gov/compliance/resources/policies/civil/epcra/index.cfm>)
- For a change in the chemical reported (including a metal to a metal compound) you must withdraw the original submission and re-submit for the new chemical. This is not a revision.

## Notes:

Here are a few more reminders regarding revisions and withdrawals. If submitting a Form R to replace a previously filed Form A, this is not considered a revision (do not check the revision box). It is considered a late submission of Form R. You would also need to request that the Form A be withdrawn. Note that submitting a Form A when a Form R is required is considered a less severe violation than failing to submit either form, but it is considered a late submission.

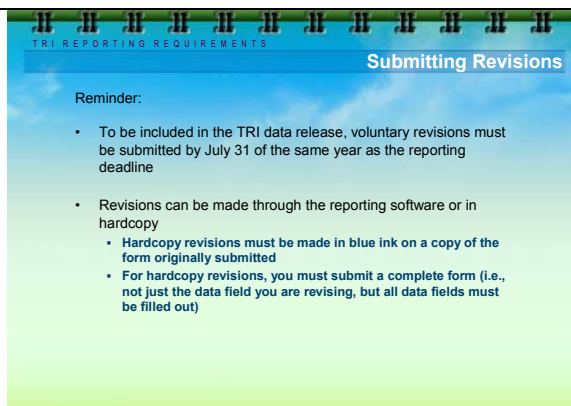
A common revision is to change the chemical reported from a metal to a metal compound or vice versa. In that case the original submission must be withdrawn and the form for the new chemical should be submitted. This is not considered a revision.



## Slide 71

### Submitting Revisions

Duration: 00:00:44



TRI REPORTING REQUIREMENTS

#### Submitting Revisions

Reminder:

- To be included in the TRI data release, voluntary revisions must be submitted by July 31 of the same year as the reporting deadline
- Revisions can be made through the reporting software or in hardcopy
  - Hardcopy revisions must be made in blue ink on a copy of the form originally submitted
  - For hardcopy revisions, you must submit a complete form (i.e., not just the data field you are revising, but all data fields must be filled out)

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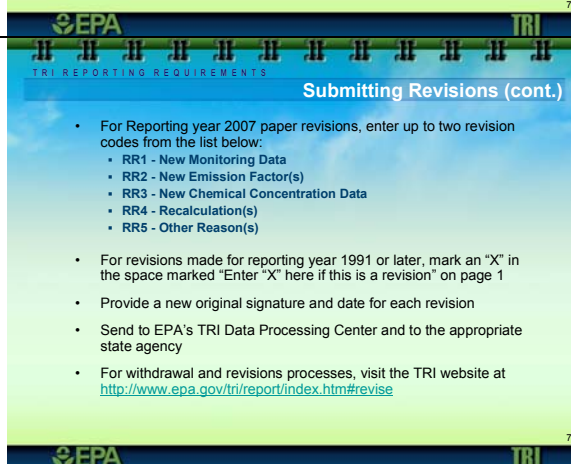
### Notes:

Here are some reminders related to submitting TRI revisions. If, at any time, a facility finds there has been a reporting error, they can submit a revision. If it is a recent error, it can be corrected before the public release of the TRI data for that year if it is submitted by July 31st of the same year that the original report was submitted. If the revision is submitted after that, the revision will still go through; however, it would likely show up in subsequent data releases. Revisions can be made through the TRI-ME desktop and TRI-ME web applications, or in hardcopy, with the TRI-ME software being the preferred method.

## Slide 72

### Submitting Revisions (cont.)

Duration: 00:00:47



TRI REPORTING REQUIREMENTS

#### Submitting Revisions (cont.)

- For Reporting year 2007 paper revisions, enter up to two revision codes from the list below:
  - RR1 - New Monitoring Data
  - RR2 - New Emission Factor(s)
  - RR3 - New Chemical Concentration Data
  - RR4 - Recalculation(s)
  - RR5 - Other Reason(s)
- For revisions made for reporting year 1991 or later, mark an "X" in the space marked "Enter X" here if this is a revision" on page 1
- Provide a new original signature and date for each revision
- Send to EPA's TRI Data Processing Center and to the appropriate state agency
- For withdrawal and revisions processes, visit the TRI website at <http://www.epa.gov/tri/report/index.htm#revise>

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### Notes:

To make a revision, you must submit a new complete form, not just the data field you are revising. For paper submittals, prior to reporting year 2007, there is a check box to indicate that this is a revision that is being submitted. For 2007, facilities will enter up to two of the revisions codes shown here indicating the reason for the revision.

Facilities need to re-certify each revision submission and they need to be submitted to EPA's Data Processing Center and to the appropriate state agency.

Additional information on revisions, and also on withdrawing data, are available on the TRI website.

## Slide 73

### Revising TRI Data – Preferred Method

Duration: 00:00:33

**Revising TRI Data – Preferred Method**

- Submitting revised TRI forms, using *TRI-MEweb* or the *TRI-MEDesktop* Software, through the Internet via EPA's CDX, is the preferred method
- More information regarding revisions:
  - In the *TRI-MEweb* and *TRI-MEDesktop* software
  - At <http://www.epa.gov/tri/report/index.htm#revise>
- Please be aware that in CDX capable states submitting via CDX to EPA will also satisfy your state obligations. For non-CDX capable states, revisions must also be submitted in the state-specified format (e.g., diskette, paper, etc.)
  - CDX capable states: CA, CO, DE, IL, IN, KS, KY, MI, MN, OK, OR, PA, SC, TX, UT, VA, WA

### Notes:

The preferred method for submitting revisions is electronically using the TRI-ME software through the Internet via EPA's central data exchange. Be aware that when submitting via the central data exchange to EPA, it will satisfy your state obligations only for states that are CDX-capable shown here. For states that are not yet CDX-capable, facilities must remember to also submit the revision to the state, such as on a diskette or hardcopy.

## Slide 74

### TRI-ME Tutorials

Duration: 00:01:03

**TRI-ME Tutorials**

- **TRI-MEweb has integrated on-line tutorials to assist users with common functions in the application.**
  - Tutorials will cover areas such as
    - Registration
    - Accessing your facility
    - Preparing your submission
    - Using the Section 8 Calculator
    - Certifying Data
- Beginning RY2005, USEPA introduced the *TRI-ME Tutorials*. Each tutorial is approximately four minutes and offers several help topics that will assist users with their TRI reporting experience
- The tutorials can be viewed at:
  - <http://www.epa.gov/tri/report/software/index.htm>
- To view the *TRI-ME Tutorials*, you must have the following:
  - Internet access
  - Web Browser (Internet Explorer, Netscape, etc.)
  - Macromedia Flash capability
    - Use the following link to check if your computer has Macromedia Flash (<http://www.macromedia.com/shockwave/welcome/>)
  - Speakers/headset to listen to the audio

### Notes:

There are other tools available to assist you with your TRI reporting and using the TRI Made Easy software. Beginning this year, EPA has developed on-line tutorials to assist users with the new TRI-ME web application. The tutorials cover all of the steps needed to access, submit, and certify TRI forms using TRI-ME web.

Beginning in reporting year 2005, EPA is providing TRI-ME tutorials. The tutorials walk you through the TRI reporting process using the TRI-ME desktop software. They are available from the EPA Website. In order to use them, you must have Internet access and a web browser and Macromedia Flash capability which you can also download from the Website shown here. There is audio along with the tutorials, so you would also need to have speakers or a headset.

**Slide 75**  
**Other TRI Program  
Changes for RY 2007**  
Duration: 00:00:30

- Additional codes detailing reasons for withdrawals of Forms R and A
  - Did not meet reporting threshold for manufacturing, processing, or otherwise use (WT1)
  - Did not meet reporting threshold for number of employees (WT2)
  - Not in a covered NAICS code (WT3)
  - Other reasons (WO1)
- Additional public contact information (Forms R and A)
  - Added email address to public contact field on Form R
  - Added public contact field to Form A (name, phone, and email address).

**Notes:**

For reporting year 2007, EPA has added codes detailing the reasons for withdrawals of Forms R and A. The new codes are show here.

Finally, the TRI program has added additional public contact information to the forms. An email address for the public contact has been added to the Form R, and the public contact name, phone and email, has been added to the Form A.

**Slide 76**  
**TRI Frequently Asked  
Questions (FAQ)  
Service**  
Duration: 00:00:21

- Browse frequently asked questions and answers.
- Submit new questions.
- Access to the service is available from the "Contact Us" page on the TRI website:
  - <http://www.epa.gov/tri/contacts.htm>

**Notes:**

Recently, the TRI Program has developed a Frequently Asked Questions Service. In addition to allowing facilities to browse past questions and answers, it also allows users to submit new questions and receive timely answers. This service new service can be accessed at the website shown here.

**Slide 77**  
**TRI Contact  
Information**  
Duration: 00:00:20

- TRI Technical Support
  - For technical questions related to TRI-MEweb, TRI-ME software, and the Central DataExchange (CDX), please contact the CDX Hotline at epacdx@csc.com or call toll-free at (888) 890-1995.
- TRI Information Center
  - Provides a toll free number that facilities may call to obtain guidance on TRI reporting requirements and help on completing the TRI reporting forms.
  - The number is (800) 424-9346. Callers in the Washington, D.C. metropolitan area call (703) 412-9810. The TDD is (800) 553-7672. The local TDD is (703) 412-3323.

**Notes:**

If you want more information about TRI-ME web, TRI-ME desktop, and the central data exchange, please use the CDX hotline and email address shown here. For information on TRI in general, facilities can call the TRI information center at the numbers shown here.

## Slide 78

### TRI-Data Processing Center

Duration: 00:00:20



TRI REPORTING REQUIREMENTS

TRI-Data Processing Center

- For hand courier, certified mail, fed ex, UPS delivery:  
TRI Data Processing Center  
c/o Computer Sciences Corporation  
Suite 300  
8400 Corporate Drive  
Landover, MD 20785
- For regular mail:  
TRI Data Processing Center  
P.O. Box 1513  
Lanham, MD 20703-1513

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### Notes:

If you need to send something by courier or certified mail, or by FedEx or UPS to the TRI Data Processing Center, use the address shown here. If you're sending something via regular mail to the TRI Data Processing Center, send it to the post office box shown here.

## Slide 79

### End of Module

Duration: 00:00:05



EPA TRI

End of Module

TRI

### Notes: